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*Ethnographical studies in Celebes*

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RESULTS OF THE AUTHOR'S EXPEDITION  
TO CELEBES 1917—1920

---

I.

STRUCTURES AND SETTLEMENTS  
IN  
CENTRAL CELEBES



With 6 Maps and 263 Figures.

by  
*Walter Kaudern*



GÖTEBORG 1925  
ELANDERS BOKTRYCKERI AKTIEBOLAG

## Errata. Vol. I.

Map 3 between page 8 and page 9, *read* 1:2083000 *for* 1:0183000.

Page 13, l. 6 from the top, *read* these regions *for* these regions.

» 27, l. 1 » » » , *read* Saadang Toradja *for* Sadang Toradja.

» 27, l. 18, l. 23 from the top, *read* aborigines *for* aborigenes.

» 38, l. 2 from the bottom in note, *read* 1918 *for* (1918).

» 53, l. 10 from the top, *read* aren palm (*Arenga saccharifera*) *for* sago palm.

» 56, l. 1 » » » , *read* somewhat *for* somwhat.

» 56, l. 5 » » » , *read* beyond *for* beynd.

» 59, l. 19 » » » , *read* and down *for* anddown.

» 66, l. 3 » » » , *read* (b in Figs 34, 35) *for* (b ins Figs 34, 35).

» 74, Fig. 43 l. 1, *read* gate-posts *for* gatl-posts.

» 78, Fig. 47 l. 1, *read* wood carvings *for* wood carings.

» 90, l. 1 from the top, *read* (k in Figs 56 *for* (kin Figs 56).

» 120, l. 2 from the bottom, *read* the gable *for* thea gable.

» 163, Fig. 109 l. 1, *read* Toro *for* Poru.

» 167, Fig. 113 l. 3, *read* part of *for* partof.

» 207, Fig. 145 l. 2, *read* to the right *for* to the left.

» 219, Fig. 157 l. 3, *read* with the temple *for* with temple.

» 236, Fig. 173 l. 3, *read* sections *for* sektionen.

» 259, Fig. 190, *read* Tomado *for* Tomodo.

» 260, l. 9 from the top, *read* of the *for* ofthe.

» 272, l. 2, l. 3 from the top, *read* each log (a<sup>1</sup> in Figs 198—201) resting on three stones partly buried in the ground *for* each (a<sup>1</sup> in Figs 198—201). stones partly buried in the ground log resting on three.

» 280, Fig. 205 l. 3, *read* g<sup>1</sup>: roof-truss *for* g<sup>1</sup> roo-truss.

» 283, Fig. 208 l. 3, *read* frame at the bottom *for* frame ax the bottom.

» 289, Fig. 214 l. 1, *read* a<sup>3</sup>; *for* 3;

» 314, l. 16 from the bottom, *read* post *for* poste.

» 320, l. 1 » » » , *read* where *for* wheer.

» 321, l. 16 from the top, *read* korten *for* koorten.

» 325, l. 3 » » » , *read* van *for* wan.

» 326, l. 3 » » » , *read* naar *for* nar;

» 328, l. 15 » » » , *read* rerenga *for* eerenga.

» 328, l. 9 from the bottom, *read* werd *for* werde.

» 328, l. 1 » » » , *read* reliquieën *for* reliquieen.

» 329, l. 2 from the top, *read* betrad *for* betrod.

» 329, l. 9 » » » , *read* toemampoe-stijl *for* toempoe stijl.

» 329, l. 16 » » » , *read* voorstelling *for* vorstelling.

» 329, l. 16 from the bottom, *read* iederen *for* iedereen.

» 331, l. 7 » » » , *read* sichtbar *for* siebar.

» 336, l. 9 » » » , *read* auf den dicken Planken *for* auf der dicken Planken.

» 352, l. 1 » » » , *read* hinausragende Galerien *for* hinaus-ragen Galerien.

» 362, l. 7 from the top, *read* zoodanig *for* zodanig.

» 368, l. 9 » » » , *read* possess *for* posess.

» 403, l. 4 » » » , *read* Hoëvell *for* Hoevell.

» 404, l. 4 » » » , *read* Oud *for* Ond.



*To*

*Director*

*Gustaf Werner, Esq.*

*Gothenburg,*

*with the author's gratitude and esteem.*



## PREFACE.

*The publication of this first part of my work »Ethnographical studies in Celebes» has been assisted by a grant from the Swedish Government to whom I beg to express my respectful thanks.*

*I have the pleasure of acknowledging contributions towards the working out of my material from Director G. Werner at Gothenburg and from the Längman's Cultural Funds at Uppsala. I have taken the liberty of inscribing this book to Director Werner as a small token of my gratitude for his interest in my work and for his kind generosity.*

*To the Directors of the Längman's Cultural Funds I also beg to tender my respectful thanks.*

*To my friend Baron E. Nordenskiöld I hereby offer my sincerest thanks for the interest he has shown my work by placing at my disposal a study in the Ethnographical Museum of Gothenburg. Besides I am greatly indebted to him for many a valuable advice.*

*As to the illustrations of this volume, I have to thank the Doctors P. and F. Sarasin at Basel, Professor A. Grubauer at Burghausen, the Director of the Prins Hendrik Museum at Rotterdam, van Nieuhuys, and my friend O. Strandlund in Java for kindly placing at my disposal original photographs from places in Celebes where I have not been myself, or of structures already destroyed, supplementing to the best advantage my own photographs and drawings.*

*The publisher of my book »I Celebes Olygder», Mr. K. O. Bonnier, kindly lent me a number of stereotype plates, used for that book, without any charge being made.*

*All the construction drawings are made by the author*

himself after sketches and notes made at the place. They all are on the scale of 1:100. Only the miniature drawings, showing the place of the different sections, are on the scale of 1:400. The wood carvings as a rule are represented on the scale of 1:10 or 1:20. The maps are made by the author and founded on the maps, belonging to L. van Vuuren's «*Monographi Celebes*» vol. I.

The geographical names and words belonging to the Malay language or to the Toradja languages are spelt in Dutch, in order to keep the conformity with the Dutch literature, being the most important one to my topic.

The translation into English from my manuscript was carried out by my wife, and revised by an English lady.

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## Introduction.

In order to contribute to the solvation of the zoo-geographical questions connected with the island of Celebes in the Dutch East Indies, I went in December 1916 to this island, accompanied by my wife. Beside the zoological work, I intended to study the natives of the country as far as time would allow.

I preferably intended to go to districts not yet visited by any naturalist, or to which some naturalist or other had only paid a short visit. That is why we soon came in contact with native tribes the culture of which was very little known. We took more and more interest in the natives, and at last the study of them became the principal part of our work, and I made a collection of more than 3,000 ethnographical objects.

## The journey. (Map 1, Map 2)

On the 5th of December 1916 the expedition left Gothenburg, and on the 27th of January 1917 we safely arrived in Batavia, the capital of the Dutch East Indies. A month later we took a Dutch steamer to Celebes, and arrived on the 9th of March in a small harbour called Djiko on the south coast of the northern peninsula. From this place we had only four hours on horseback to the gold mine of Goeroepahi, situated in the middle of the primeval forest in the mountains, the first head quarters of the expedition.



## 1917.

March 9—May 10: the neighbourhood of the gold mine was studied;

May 11—June 9: sojourn, chiefly for zoological purposes, at a small plantation of coco-nut palms, called Motongkad, near the coast;

June 9—July 24: stay at Goeroepahi;

July 25: this day the expedition started for Modajag, a coffee plantation on the north slope of the mountain range, running through the interior of the northern peninsula. From Modajag I made excursions to Lake Danau on the border of Minahassa, and along the north coast of the peninsula;

August 23—Aug. 26: stay at Lake Danau;

Aug. 27—Sept. 13: journey by motor-boat along the north coast. From Bolaang I first went to Poigar which is on the border between Minahassa and Bolaang Mongondou, and to Boelongko in Minahassa. Then I went westward, visiting the island of Motoeo, later Paleleh, Bolaang Gidoeng, Lokodoka, Tabamoeang, Lokodidi, Lonoe, and Bwool. Coming back I also visited Soémalata, Boroko, and Bolaang Itang.

Oct. 21—Oct. 24: visit to Amoerang in Minahassa;

Oct. 28—Nov. 1: journey to Menado, and visit to Lake Tondano;

Dec. 3—Dec. 18: sojourn at Lake Danau;

Dec. 21: return to Goeroepahi;

Dec. 22—Dec. 31: stay at Goeroepahi.

## 1918.

Jan. 1—April 18: stay at Goeroepahi;

April 19: the expedition went down to Djiko in order to leave this part of Celebes;

April 23: on this day we took a Dutch steamer, running along the coast of Celebes;

- April 26: landed in Paloe on the west coast of Central Celebes;
- May 4—May 8: preliminary survey of the Paloe Valley, and the district of Koelawi south of the Valley;
- May 19: journey from Paloe to Kalawara, quarters of missionaries belonging to the Salvation Army;
- May 20—May 22: stay at Kalawara;
- May 23, May 24: journey to Koelawi where we had our head quarters during our stay in this part of the island (9 months);
- June 18, June 19: visit to Winatoe;
- June 24, June 25: visit to Lindoe;
- Sept. 4—Sept. 6: journey to Kantewoe where we stayed to October 22;
- Sept 16, Sept. 17: visit to the Tole village of Pangana;
- Sept. 20, Sept. 21: visit to the village of Peana;
- Sept. 23—Sept. 28: excursion via Peana and Mopahi to Benahoe south of the Karangana River, and back again to Kantewoe;
- Oct. 4—Oct. 13: excursion to the districts of Tobakoe, Bangakoro, and Tole. I visited the following villages: Lawe, Kanoena, Biro, Siwongi, Towoeloe, and Tipe, all in Tobakoe, Bangakoro in the district of the same name, and Poraelea, Bente, Kilo and Ioentoe in Tole;
- Oct. 22—Oct. 24: journey from Kantewoe back to Koelawi;
- Oct. 25—Dec. 5: stay at Koelawi;
- Dec. 6—Dec. 19: excursion to the districts of Bada and Behoa;
- Dec. 6—Dec. 8: march southward via Gimpoe and Bokoe to Gintoe in Bada;
- Dec. 9—Dec. 11: excursions in the district of Bada;
- Dec. 12: march to the village of Doda in Behoa;
- Dec. 13—Dec. 16: excursions in the district of Behoa.
- Dec. 17—Dec. 19: march via Gimpoe to Koelawi;
- Dec. 19—Dec. 31: stay in Koelawi;

## 1919.

- Jan. 1—Januari 23: stay in Koelawi;  
 Jan. 24, Jan. 25: visit to 'Toro;  
 Jan. 26: visit to 'Tamoengkolowi;  
 Jan. 29—Jan. 31: second visit to Lindoe;  
 Febr. 3, Febr. 4: the expedition left Koelawi, and arrived at Kalawara;  
 Febr. 6—March 14: journey to Soerabaja and back again;  
 March 15—March 20: stay at Kalawara;  
 March 21, March 22: the collections were transported from Kalawara via Paloe to Donggala;  
 March 23—May 16: stay at Donggala to pack the collections from Central Celebes;  
 May 17: started a journey to NE. Celebes. Left this day Donggala by a sail boat, and went to 'Tawaili on the opposite shore of the Paloe Bay;  
 May 18—May 20: march from 'Tawaili to Toboli and Parigi at the Gulf of Tomini;  
 May 21: journey from Parigi to Poso on a small steamer belonging to the Dutch Government;  
 May 22—May 24: stay at Poso;  
 May 25, May 26: march southward over Koekoe to Tentena;  
 May 27—June 1: stay at Tentena, excursion to Boejoem-pondoli;  
 June 2, June 3: march from 'Tentena over Kelei to the village of 'Taripa in Ondae;  
 June 4—June 11: stay at 'Taripa;  
 June 12—June 18: march from 'Taripa through the districts of Pada and Mori to Kolono Dale on the east coast. In the village of 'Tomata we stopped for a couple of days and I visited the village of Pakoe south of 'Tomata;  
 June 19—July 3: stay at Kolono Dale, waiting for the Dutch steamer;  
 July 4: journey by steamer from Kolono Dale to Loewoek;  
 July 5—Sept 5: stay at Loewoek;

- Sept. 5, Sept. 6: sailed to Soekon in the district of Lamala;  
 Sept. 7—Sept. 15: stay at Soekon;  
 Sept. 16—Sept. 19: excursion in Lamala, visiting the villages of Molino, Mantok, Kalibambang, Lonas, and Tongke;  
 Sept. 22—Sept. 24: sailed from Soekon back to Loewoek;  
 Sept. 25—Dec. 1: stay at Loewoek;  
 Dec. 2: march from Loewoek to Biak;  
 Dec. 3: march from Biak to Poh;  
 Dec. 4: march from Poh to Pagimana;  
 Dec. 5, Dec. 6: march from Pagimana to Lojnang where we stayed in Pinapoean;  
 Dec. 7—Dec. 25: during this time I made excursions to nearly all the villages of Lojnang except those of Baloa, a district at that time not subdued by the Dutch.  
 Dec. 26—Dec. 31: return from Lojnang to Loewoek;

## 1920.

- Jan. 1: arrived at Loewoek;  
 Jan. 2—Jan. 22: stay at Loewoek;  
 Jan. 23: voyage by a Dutch steamer to the Banggaai Archipelago east of Celebes;  
 Jan. 24—Febr. 23: head quarters at Oeliasan on Banggaai;  
 Jan. 28: visit to the big village of Kalombatang, consisting of about 200 pile-dwellings, situated in the Strait of Kalombatang, close to the coast of the Peling Island;  
 Jan. 29—Febr. 4: stay at Oeliasan;  
 Febr. 5—Febr. 16: excursion in the southern part of the Peling Island;  
 Febr. 17—Febr. 23: stay at Oeliasan;  
 Febr. 24—March 3: voyage along the east coast of Celebes to Baoe Baoe on the island of Boeton;  
 March 4—April 5: stay at Baoe Baoe;  
 April 6—June 5: stay at Kraton near Baoe Baoe;  
 June 6—July 7: stay at Baoe Baoe packing;

- July 8—July 12: voyage from Bae Bae via Macassar to Soerabaja;  
 July 13—Nov. 11: sojourn in Java, chiefly at Batavia, for studies in the ethnographic library;  
 Nov. 12 in 1920—Febr. 15 in 1921: Voyage from Java to the Philippine Islands and back to Sweden via Suez.

## Results.

The scientific results of the expedition are zoological, botanical, and ethnological. The zoological and the botanical results will be published separately.

I have planned the publication of the ethnological results in a work of about 10 volumes, each volume treating a special question, such as the structures of the natives, the dress, the art, etc.

As the most important results were obtained in Central Celebes, our researches in this part of the island will be treated in the first volumes.

I have especially studied the tribes of the NW. part of Central Celebes, that is to say the tribes living in the districts round the river Koro, and the river Mioe, and their sources, thus districts situated on the boundary of the three regions inhabited according to Kruijt and Adriani by the Poso Toradjas, the Kaili Toradjas, and the Saadang Toradjas.

## Short notes on the topography and the geography of Central Celebes.

(Map 3, Map 4)

The central part of the island has the shape of a triangle, the point turning toward the east, the base toward the Strait of Macassar in the west. This part sends out four

big peninsulas all continued by long stretched, submarine banks, supporting a number of islands and groups of islands.

One peninsula juts out toward the north, then turns straight toward the east, ending in the district of Minahassa where we find a great many extinct volcanoes. The peninsula is continued by a rather deep submarine bank carrying the small Sangi Islands.

Another peninsula shoots forward toward the NE., continued by a bank supporting the Banggai Archipelago.

The third peninsula stretches toward the SE., and is continued by the islands of Wowoni, Moena, Boeton, Kabana, and Toekang Besi.

Finally we have a fourth peninsula extending southward. This peninsula also is continued by a number of islands the biggest of which is Saleyer.

Because of its very strange shape, Celebes is more like a complex of provinces differing from each other as to population and culture, than a uniform country.

Celebes thus very well can be parcelled into five big districts: Central Celebes, North Celebes, North-east Celebes, South-east Celebes, and South Celebes. There are no natural boundaries between the peninsulas and the central part except in the NE. where the NE. peninsula is separated from Central Celebes by the valleys of the river of Soemara, and the river of Tajawa or of the Oee Koeli.

The line between North Celebes and Central Celebes can either be drawn along the valley of the Parigi river to Paloe, or along the Reage Valley at Tawaili toward Toboli on the coast of the Gulf of Tomini.

The line between Central and SE. Celebes may be drawn from the Gulf of Tolo toward the SE. along the mountain range on the boundary of the districts of Mori and South Boengkoe to Lake Matano. From this lake we draw the line toward the SE. along the ridge of the chain just west of Lake Matano to Malili at the Bay of Oesoe. Thus Lake Matano and its affluents will belong to SE. Celebes.

It is still more difficult to draw a line between Central Celebes and South Celebes, because the former continues topographically far southward on the southern peninsula. The mighty chain of Latimodjong is more closely connected with the mountains of Central Celebes than with those of the southern peninsula, and the greater part of the valley of the Saadang River belongs to Central Celebes, only the lower part of it to the peninsula.

If we only consider the ethnological point of view, the line can very well be drawn from Palopo, the inhabitants of which are mostly Boegenese, westward to Latimodjong, following this range southward, then turning toward the west, making the district of Enrekang part of Central Celebes.

There is however one fault with this line: it makes part of the southern peninsula belong to Central Celebes. But if we drew a line from Palopo straight toward the S W. to the Mandar Bay, it would cut the Saadang Valley into two portions making part of the Saadang Toradjas belong to Central Celebes, part of them to South Celebes. On the other hand, if we want to refer the Saadang Toradjas to South Celebes, the line will make a curve northward into the proper Central Celebes.

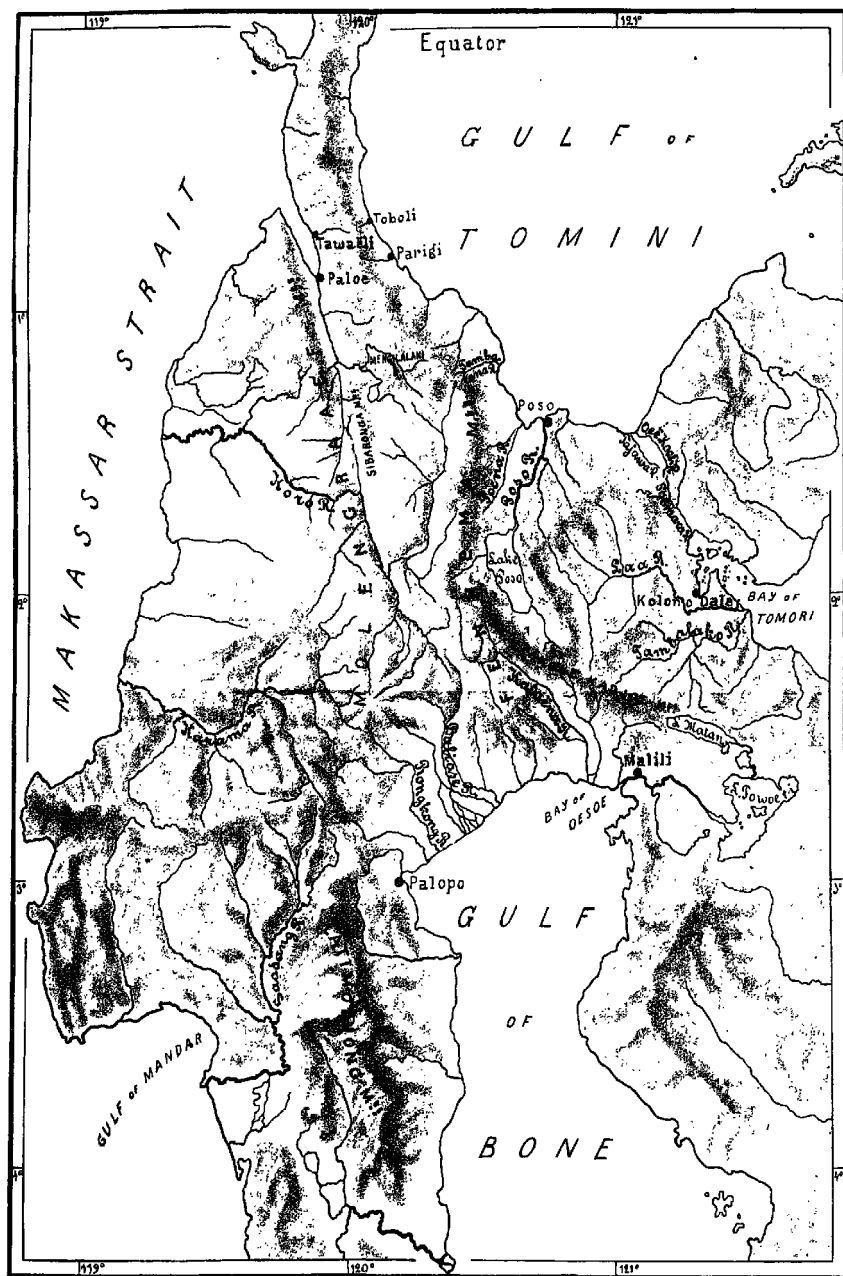
Central Celebes is like the rest of the island filled up with mountains. All the ranges more or less run from the north to the south. The most important mountain ranges are to be found on map 3.

As a rule the mountains of the western part are wilder and higher than those of the eastern part. We often find summits and crests of 3000 m. and still more as for instance Ngilalaki (3311 m. Fig. 1) east of Lake Lindoe, and the mountains between Koelawi and Tobakoe (3147 m.). Further to the SW. there are several peaks about 3000 m. in height, and at the base of the southern peninsula we have in Latimodjong peaks nearly 3500 m. in height.

Generally the crystalline rocks predominate in the western part, the sedimentary rocks in the eastern part where







Map 3. Central Celebes.



at many places we find caves, and other phenomenoms, characteristic of a Karst.

Volcanos or real volcanic activity is not found here, but vibrations of the earth are rather common, and at many places there are mineral as well as thermal springs.

The mountain ranges are pressed into great folds, faulted, and profoundly fractured, and the country consequently



W. Kaudern Photo.

Fig. 1. Ngilalaki at Lake Lindoe.

is filled with chasms, glens and valleys. Besides we notice in this part of Celebes a number of valley basins some of which are depressions. These basins are old lakes that gradually have been filled up by mud, tapped and converted into dry land. At some places there is still a lake. The biggest lake of this kind is Lake Poso, situated almost in the middle of the island. Another is Lake Lindoe (Fig. 1) further to the NW. Besides there is a great number of small lakes as Ranorano and Rano near the source of the Tawaelia,

Ranoe Tioe near Kolono Dale, and some very shallow lakes in the Toro Valley, and in the plain of Ondae.

Celebes is rich in running waters, the biggest of the rivers naturally being found in Central Celebes, as the Paloe River in the N W, draining the Paloe Valley and by means of its two tributaries, the Goembasa and the Mioe, the mountains south of the Valley.

The Lariang, the Karama, and the Saadang Rivers which drain the greater part of western Central Celebes empty into the Strait of Macassar.

A number of rivers run southward to the Gulf of Bone. Among these we notice the Rongkong River, the Baliase River, and the Kalaena River.

In the eastern part of Central Celebes the Tambalako River and the Laa River drain a large district and empty into the Bay of Tomori.

Among the rivers emptying into the Gulf of Tomini we notice the Tambarana River, the Poena River, and especially the Poso River, the outlet of Lake Poso.

As my studies chiefly concern the native culture of NW. Central Celebes, I think it necessary to give a more detailed description of the topography of this district to make intelligible the conditions under which the natives in this part of Celebes live.

As already mentioned, the country is occupied by wild mountains. There is only one big plain, the Paloe Valley, extending from the Paloe Bay 40—45 km. southward, on each side bordered by a great fault-line, parallel to the Valley, and continuing far southward into the country. Especially remarkable is the western fault-line, passing Koelawi and Gimpoe, and proceeding along the Koro and its tributary the Rampi. This line has been cleared out by the two Swiss scientists P. and F. Sarasin, and is called the Sarasin line.

West of this line rise a number of high chains, in common called the Molengraaff mountains. In the Paloe Valley

where the ranges rise abruptly from the plain to 2000 m., these mountains are simply called the Paloe mountains. Southward the height increases, but the highest ridge, about 3000 m., on the border between Koelawi and Tobakoe, seems here turn off somewhat to the west. Other ridges, however, follow the Sarasin line. Near Koelawi the mountains are not by far so high as the main range, but southward they become higher and wilder, covered by primeval forest. The chain west of the Koro and the Rampi the Sarasins have called the Koro mountains.

West of these mountains there is a wild mountain district with deep valleys, running more or less from the S W. to the N E., passing into an almost unknown belt of primeval forest, extending toward the west almost to the swamps on the Mamoedjoe coast at the Strait of Macassar.

The mountain range on the east side of the Paloe Valley is a continuation of the mountains of the northern peninsula. Southward it merges into the great range in which we find the above mentioned peak of Ngilalaki. Further to the S E., it is continued by the Fennema chain.

East of Koelawi there rises a range called Sibaronga after its highest summit (about 1400 m.). This range extends toward the Paloe Valley in the north, having between Lake Lindoe and the Sarasin line a number of peaks the height of which in the neighbourhood of Lake Lindoe amounts to more than 2000 m. More known than these is Boeloe Momi, owing to the fact that the road from the Paloe Valley to the mountain districts south of it has been drawn over the western slope. The ends of this range might be found in the neighbourhood of Bora in the Paloe Valley.

Southward, the Sibaronga range continues along the valley of the Mewe over Gimpoe west of the above mentioned fault-line, ending south of Bokoe in a plateau, gently sloping toward the valley of the Koro. Just opposite to this plateau, rise the above mentioned Koro mountains.

Eastward the Sibaronga range merges into a wild and

inaccessible mountain region. Here and there in the northern part it is bordered by valley basins as Palolo, Lindoe, and T'oro. Southward it is dissolved into a number of more or less parallel, highly wild and wooded ridges partly merging toward the NE. into the mountain aggregate supporting Ng'lalaki.



The rocky region ends toward the south at the plain of Bada, where the rock massif is cut off by a fault-line running almost exactly from the east to the west.

This rocky region between Ng'lalaki and Sibaronga, in the N.W., and Bada in the south is bordered in the east by the valley of the Tawaelia River, and the valley basins traversed by it or close to it, such as Tawaelia, Napoe, and Behoa.

South of the depression of Bada, between the Molen-graaf mountains and the Fennema mountains, there is another vast, wild, rocky region, with deep valleys and valley basins, the most important of which are Rampi and Leboni.

The numerous rills, torrent sand rivers of these regions,



FIG. 2. The Krodawi plain seen from the hills at the village of Suen Lee grove a little to the right on the plain is the Bolapapoe Hill. W. Kaudern Photo.

speeding at the bottom of the valleys, often flow in violent rapids, and make imposing waterfalls. They all belong to two river basins: that of the Paloe River and that of the Koro River.

Into the Paloe River is discharged by the Goembasa, and the Mioe the waters of the mountains south of the Paloe Valley. The Goembasa, draining a rather large district in

the S E., has a tributary, the Sopoe, coming from the north slope of Ngilalaki, and making a curve toward the north into the district of Palolo before joining the Goembasa by which Lake Lindoe discharges its waters into the Paloe River. The Goembasa is said to have at least one great water fall, owing to the fact that the level of Lake Lindoe is about 900 m. above the Paloe Valley.

The Mioe, rising in the high mountains between Gim-poe and Tobakoe, receives in its course all the waters of the valley basin of Koelawi: Not far from its junction with the Paloe River, it receives a big tributary called the Sakoeri the source of which lies not far from Banggakoro.

The watershed of the two basins is a ridge rising about 200 m. above the level of the Koelawi basin. Standing on the top of this ridge we see waters flowing in opposite directions.

The Koro, in its upper course called the Tawaelia, emerges from a little lake in the Fennema mountains not far from the source of the Tambarana. Running S S W. through the valley basins of Tawaelia and Napoe it receives a great many tributaries. South of Napoe, the river receives the two tributaries the Rompo and the Torire, the latter draining the basin of Behoa.

When the Tawaelia has reached the district of Bada, it suddenly turns to the west to wind rather slowly over the plateau of Bada. Just before leaving it, the Tawaelia receives from the south a rather big tributary called the Malei, and having its source in the Fennema mountains. Not far from the junction, the river enters a rocky gorge, and becomes more rapid. Here it is called the Belanta. It makes a sharp curve toward the south and receives the Rampi River which drains an extensive area south of Bada between the Molen-graff and the Fennema mountains. Here we have the districts of Rampi and Leboni, the latter on the banks of the Leboni River. Not far from the junction of the Rampi with the Belanta, the river makes a sharp turn to the north,

and is called the Koro. Its course is very strong, and very often the river flows in violent rapids. From the N E. it receives a great number of torrents and from the S W. the big, foaming Karangana. This river has its source far in the S W. near the source of the Karama, and drains the basins of Benahoe and Mopahi.



W. Kaudern Photo.

Fig. 3. The Koro near Pangana in Tole.

The Koro follows the Sarasin line to Gimpoe where it receives from the north the Mewe, in its upper course called the Haloea. The source is found on the watershed south of Koelawi. The Haloea receives from the east some tributaries one of which drains the Toro Valley.

After the reception of the Mewe, the Koro turns abruptly to the west, winding through a wild mountain district, and fed by a number of tributaries, especially on its left bank. Here we notice the Mama, the Mokoë and the Lamoï. The district situated round the lower part of these rivers and the



Koro is called 'Tole. The Mokoë, the biggest of the three, drains the plateau of Kantewoe-Peana. Further to the west there are still other tributaries on the left bank, draining the southern part of the district of Tobakoe.

In this district not far from the village of Siwongi, the river turns toward the N W. and receives from the east the waters of the Towoeloe. The course of the river is violent as far as to Banggakoro where it becomes more calm. Under



Fig. 4. The Koro at Banggakoro. W. Kaudern Photo.

the name of the Lariang, the river flows to the Strait of Macassar. From Banggakoro it is navigable for canoes. In this part of its course it receives two tributaries of importance, the Tinaoka from the N E., and the Ho from the S W.

Although rich in running waters N W. Central Celebes has very few lakes. The only one of importance is the above mentioned Lake Lindoe. The level is about 960 m. above the sea, and its deepest part is more than 70 m. Near the southern shore there is a small island.

In the upper course of the Tawaelia we find a couple of small lakes, and in the plains of Behoa and Toro extensive swamps. In the middle of the Toro plain there is even a shallow body of water, in the wet season increasing considerably.



Fig. 5. Lake Lindoe at the village of Tomado. To the right the Lindoe Island.

W. Kaudern Photo.

But if nowadays there are few lakes in these districts, the valley basins are all the more numerous, and most of them have unmistakably been lakes. At the bottom of these basins we generally find a more or less even plain of clay: the bottom of the former lake. These valley basins are extraordinarily suited for bringing under cultivation, and they consequently are the most densely populated districts in Central Celebes.

Each basin is as a rule inhabited by a special tribe more or less different to the neighbouring tribes. Such cultivated ba-



W. Kaudern Photo.

Fig. 6. The village of Kantewoe. The upright stone stands in the middle of an open space in front of the temple.



W. Kaudern Photo.

Fig. 7. The village street of Kantewoe, seen from the west.



W. Kaudern Photo.

Fig 8. Kantewoe. Houses outside the western gate.



W. Kaudern Photo.

Fig. 9. The village of Peana. The native in the foreground in the chief of the village.

sins are Koelawi, Toro, Gimpoe, Winatoe, Kantewoe - Peana (Figs. 6—9) Mopahi, Benahoe, Tawaelia, Napoe, Behoa, and the two basins of Bada. Of the same character is also Lindoe, although there is still a lake, Leboni, Rampi, Towoeloe, and probably Bokoe.

Beside these cultivated basins there are cultivated districts in the mountains. In the corner where the



W. Kaudein Photo.

Fig. 10. The village of Pangana in Tole.

Mokoë joins the Koro we have a number of villages: Pangana (Fig. 10), Poralea (Fig. 145), Kilo (Fig. 11) Wliri and others, surrounded by grounds cleared with fire, forming the above mentioned district of Tole. West of Tole, on the banks of the Koro, there is another genuine mountain settlement called Tobakoe (Fig. 12) composing a number of villages all of which except Towoeloe (Fig. 13) and Tipe (Fig. 14) are situated on the top of ridges shooting out toward the Koro. The most important of those villages are: Siwongi, Lomo, Biro (Fig. 15) and Lawe.



W. Kaudern Photo.

Fig. 11. The village of Kilo in Tole.



W. Kaudern Photo

Fig. 12. Ridges on the banks of the Koro in Tobakoe.

In the mountains west of Koelawi there is a venerable old village of the name of Tikala, surrounded by extensive grounds cleared with fire, on the slope of the mountains. Not far from it, there are here and there a couple of houses or a single house, the whole forming a little district called Tamongkolowi, often shortened to Tangkolowi.

## The climate.

In the districts of N W. Central Celebes the missionaries have of late begun making regular metheorological observations, but for the rest we have no authentic information of this kind. The heat, however, is not oppressing. In the deepest basins temperature rises sometimes over  $30^{\circ}$  C., but in such districts as Koelawi and Kantewoe it is generally below  $30^{\circ}$  C. at daytime and about  $20^{\circ}$  C. during the night. Here and there as for instance in Behoa, the night temperature is so low that you see your own breath when you come out of your hut in the morning.

As a rule we may say that winds as well as rain depend on the monsoons, but we often notice disturbances due to the topography of the country. Many a time the natives of a district where the rains have set in, have finished preparing their fields and sowing when in another basin near by, there has not been any rain at all, or only too little to begin working in the fields. Disturbances, however, seem to be rather common. In September and October 1918 when we stayed at Kantewoe these months were unusually dry. As a rule at this time of the year the rains have set in. In 1919 when the dry season was supposed to reign at Tentena at Lake Poso, the rain was still pouring down almost every day, making the lake rise 3 m. above its normal watermark. At the same time the Goembasa flooded its banks, washing away the bridge at Pakoeli, when it should have been the dry season.







Q. Strandlund Photo.

Fig. 13. The village of Towocloe in Tohakoe.





W. Kaudern Photo.

Fig. 14. The village of Tipe in Tobakoe.



W. Kaudern Photo.

Fig. 15. The village of Biro in Tobakoe. The big house a little to the left is the temple.

The supply of rain is in the mountains abundant, but in the Paloe Valley so small that this place is said to be the driest one of the Dutch East Indies.

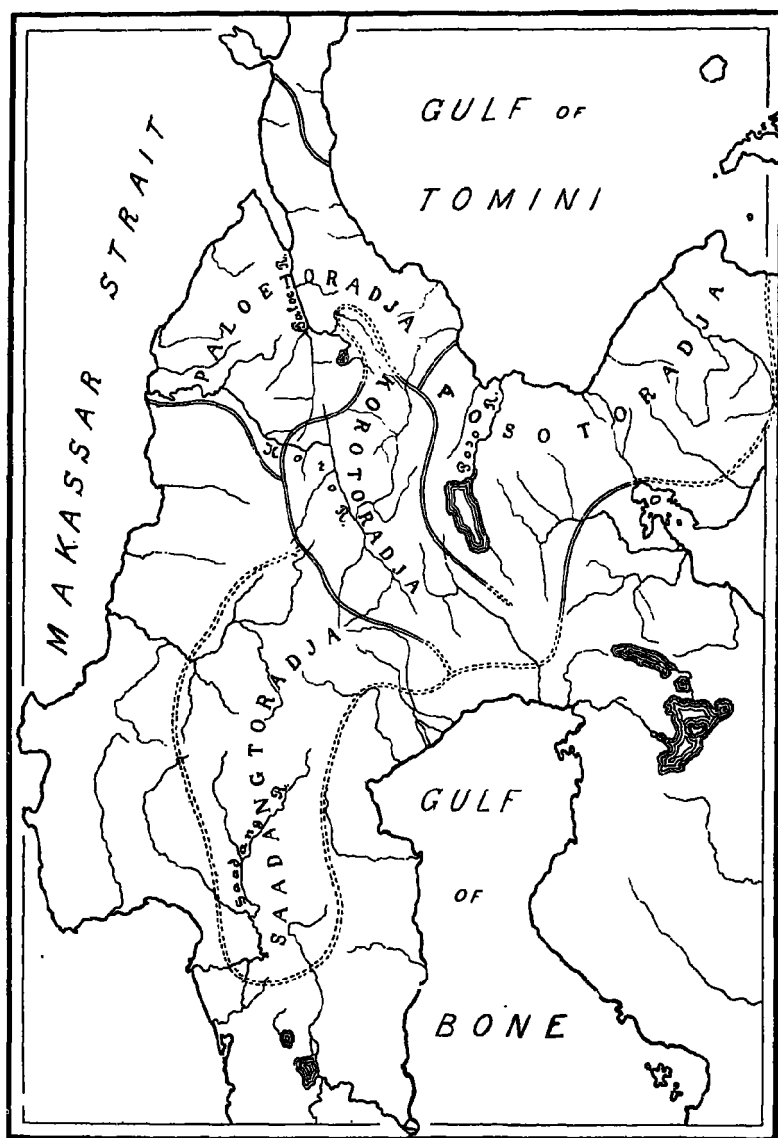
### The vegetation and the animals.

The vegetation and the animals of Central Celebes are about the same as in the rest of the island. The primeval forest however has here extensively given place to grounds cleared with fire by the natives. This is especially the case in the eastern part, where vast grounds at present are overgrown by the steppe grass called *alang alang*. In all the cultivated basins the primeval forest has of course long ago yielded to the chopping knife of the native.

There are no animals dangerous to man with exception of some poisonous snakes and insects. The smaller kind of Anoa, the native buffalo of Celebes, seems to be rather common. There is plenty of wild boars, and in certain districts the stag is very common. The *babiroesa* (lit. pig-deer) is rather scarce, and does not seem to live west of the Sarasin line. There are monkeys, but no where I saw any multitude of them.

### The population of Central Celebes. (Map 5)

If we take away some tribes living on the coast of the Strait of Macassar, and of the Gulf of Bone as well as in the districts north of the S E. peninsula, Central Celebes is inhabited by a great number of tribes known under the common name of Toradja. According to Kruijt and Andrani, the word means highlander, and originally refers to the natives living near Palopo in the neighbourhood of the Saadang River.



Scale 1:3 125 000

Map 5. Distribution of the native tribes in Central Celebes.

Except in Central Celebes we find Toradjas at the base of the northern peninsula as well as in vast districts of the N E. peninsula. The country inhabited by Toradjas is marked on map 5.

The tribes called Toradjas can be classed as follows:

1. *Poso Toradjas*:

a) Tribes living in the basin of Lake Poso as well as on the banks of the Poso River, and on the coast of the Gulf the of Tomini east and west of the Poso river;

b) Tribes living in the interior, round the sources of the Laa;

c) Tribes living in the western part of the N E. peninsula.

2. *Paloe Toradjas*:<sup>1)</sup>

a) Tribes living at the Gulf of Tomini;

b) Tribes living at the Paloe Bay and in the Paloe Valley;

c) Tribes living in the mountain districts round the Goembasa and the Mioe, tributaries of the Paloe River.

3. *Koro Toradjas*:

a) Tribes living in the district round the Koro, generally called Pipikoro;

b) Tribes living in the districts at the upper part of the Koro where it is called the Belanta and the Tawaelia.

c) Tribes living in the districts at the southern tributaries of the Koro: the Rampi and the Leboni;

d) At the Kalaena River live some tribes possibly belonging to this group, and at the same time being a transition to the Poso Toradjas.

<sup>1)</sup> Kruijt and Adriani call these tribes Parigi-Kaili Toradjas as well as some tribes which I have classed as Koro Toradjas. I have changed this name into Paloe Toradjas, analogical to the names of Poso Toradjas and Koro Toradjas as most of these tribes live in the Paloe Valley and at the Paloe Bay.

#### 4. *Sadang Toradjas:*

- a) Tribes living at the source of the Karama River;
- b) Tribes living at the Rongkong River.
- c) Tribes living at the Saadang River.

Whether all these tribes really belong to a special race, different to the neighbours I leave unsaid, but one thing is certain: anthropologically they are no pure race, but a mixture of at least two obvious elements, a fact first pointed out by the Sarasins, and later confirmed by everybody who had the opportunity of learning to know the Toradjas.

One type is as a rule rather dark brown with a round, broad face and short broad nose. The other type is a lighter brown one with a face comparatively oval, the nose rather long and narrow, straight or slightly curved. The latter type seems to be best pronounced in Bada. Both types have black, coarse hair.

Beside these two types, living promiscuously mixed together, there is a third type, very likely the aborigenes of the country. This type has contrary to the other two frizzy hair. The colour of the skin is relatively dark brown.

A number of legends tell about dwarf races with frizzy hair, living in the districts nowadays occupied by the Toradjas. Most of these aborigenes are now extinct. Others were made slaves by the Toradjas, penetrating into the country, and mixed with them. At some places this type may still be living comparatively pure as for instance in the wild mountains west of the Paloe Valley. The tribe in question is called To Pekawa, and was as late as in 1919 very little known.

Natives of this tribe I saw only once at Paloe. The size of the body was much inferior to that of the inhabitants of the Valley, and if they were measured, they would no doubt prove to be a genuine dwarf race. The hair was more or less crispy, but the colour of the skin was not darker than that of a Toradja.

Possibly there are dwarf tribes living in the mountains

east of the Paloe Valley, because in February 1919 I saw in the hospital of Paloe a native from these districts, the height of which was much inferior to that of a Toradja. Neither the shape of the face, nor the profile were those of the Toradja types. He had a long face with hardly perceptible cheek bones, and a thin, slightly curved nose, in other words a purely aryan face although brown.

Among the Toradja tribes especially the Poso Toradjas have been the subjects of long study by the two missionaries, Doctor Kruijt and Doctor Adriani who have published their results in a great number of papers. Their principal work is »De bare'e spreken de Toradja's van Midden-Celebes» which constitutes most of their researches among the Poso Toradjas.

The culture of the other Toradja groups has not been the subject of any summary work, although there are many papers treating different parts of the native culture.

As I already mentioned, I have especially studied the tribes living in the NW. part of Central Celebes, that is the tribes generally called mountain Toradjas. The tribes the culture of which will be treated in this book, are those in the table on page 27 called Paloe Toradjas c) and b), and Koro Toradjas a) and b).

The culture of these tribes I also intend to compare with that of the other Toradja tribes, especially those with which I came in contact. To compare it with that of the Saadang Toradjas I do not think necessary, or even proper as that culture in several respects is different to all other Toradja culture, and no doubt has been subject to much more foreign influence than that of the other tribes. Besides I had never the opportunity of visiting the Saadang Toradjas, and making studies of their culture.

The tribes that will be treated in this book are

*Paloe Toradjas:*

*Koro Toradjas:*

To<sup>1)</sup> Koelawi

To Gimpoe

<sup>1)</sup> To or tao means in the languages of Central Celebes man.



To Lindoe  
 To Tamoengkolowi  
 To Toro  
 To Tobakoe

To Winatoe  
 To Tole  
 To Kantewoe  
 To Peana  
 To Mopahi  
 To Benahoe  
 To Bada  
 To Behoa

### Exploration of Central Celebes.

Until late the extensive mountain districts of the Northwest were perfectly unknown, and only by hearsay they were pointed out as inhabited by rapacious headhunters.

To judge from the old literature the names of some mountain districts were known. Valentijn in his big work »Oud en Nieuw Oost-Indien» Vol. I mentions the names of a great number of villages, tributaries of the raja of Tabali. Among these villages there are five said to be inhabited by highlanders. One of them is Lindoe, another Plolo (very likely Palolo). Koelawi as well as the other mountain districts south of the Paloe Valley seem unknown to him. Among the districts south of Poso mention is made of Ontondano and Tonappo, the former very likely the present Ondae, the latter Napoe.

The eastern part of Central Celebes was first known to Europeans. In the middle of the nineteenth century the military and the civil government had cleared up many a question concerning this part, but first in the eighteen-nineties the eastern districts were systematically studied. The two above mentioned missionaries Kruijt and Adriani started this work, and a couple of years later the two famous scientists P. and F. Sarasin travelled in this part of Celebes. Later, development proceeded so quickly that at present very little is left of the original culture. Villages and heathen

temples have been levelled with the ground, and new villages have been built after modern principles. The old dresses, the weapons, the adornments, the heathen feasts, and much more belong to bygone times.

In the western part of Central Celebes, being much more difficult to penetrate, the natives lived undisturbed in their mountains. The first Europeans who dared to visit these districts were the two missionaries Kruijt and Adriani. In order to visit the natives of Napoe, the most feared headhunters of all Central Celebes, the two gentlemen went to the raja of Sigi in the Paloe Valley to ask his permission, as he at least nominally was the master of Napoe. They were allowed to go to Napoe over Lindoe.

The missionaries arrived safely in Koelawi and later in Lindoe but could not go on to Napoe, owing to the hostility of the natives in Lindoe. They had nothing else to do but to return the same way that they had come.

Five years later, in 1902, the country was once more visited by Europeans. At that time the two Swiss scientists Sarasin set out on their bold journey across Celebes from Paloe in the north to Palopo in the south. During this journey they were able to map the waters running along the so called Sarasin line, and fix the direction of the mountain ranges. As first Europeans they visited the districts of Gimpoe, Bada, and Leboni.

Some years later the country was opened by the Dutch colonial troops. At the end of 1905 they begun with Koelawi and Lindoe, and in the course of the following five years the other mountain districts had to submit to the Dutch Government.

Later, this part of the country has been visited by many Europeans, mostly Dutch officers with their patrols of native soldiers, civil officials from Paloe and Poso, and missionaries. Doctor Kruijt was one of the first Europeans who bent his course toward Napoe when the country had been opened by the troops. From Napoe he went on to

Behoa and Bada. Later the two Dutch missionaries Schuijt and Ten Kate came to work among the natives of these districts.

Among the Dutch officers and officials, appointed in NW. Central Celebes, we especially notice Kiliaan, Hissink, and captain Boonstra van Heerdt. The former has studied Napoe and especially Behoa. Hissink studied the districts of the Paloe Valley, and those south of the Valley as far as to the districts on the banks of the Koro.

As to the mapping of the districts round the sources of the Paloe River and the Koro nobody has done so much as the zealous capt. G. Boonstra van Heerdt. From September 1910 to February 1912 he traversed the country in almost every direction.

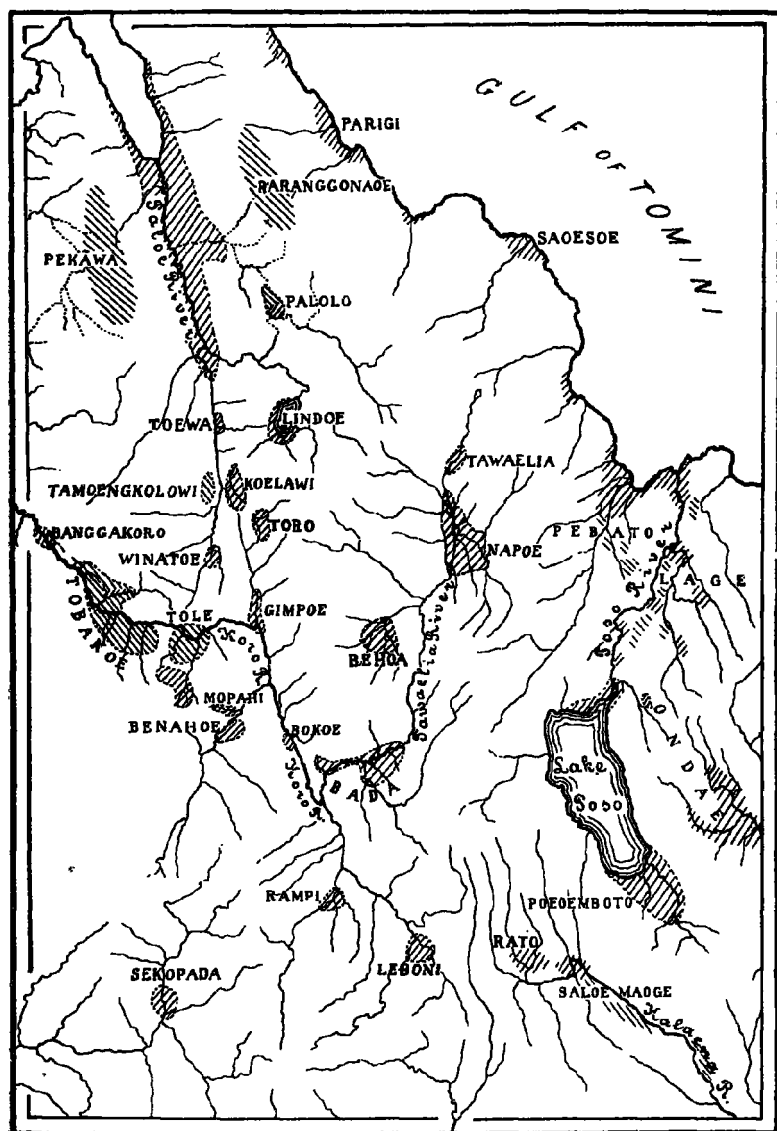
Very few naturalists have visited the mountain districts. The Dutch geologist Abendanon in 1909 and 1910 made researches in Central Celebes. He started in the south, and went as far northward as to the district of Bada. There he turned to the west following the right bank of the Koro-Laring to its embouchure into the Strait of Macassar. He also made a rapid journey from Paloe to Koelawi.

In 1911 the German professor A. Grubauer travelled in Central Celebes. The journey of most importance to my topic is the one from Poso via Napoe and Behoa to Bada. From this district he followed the valley of the Belanta-Koro to Gimpoe, and further went via Koelawi and Lindoe to Paloe. Immediately before this journey he had traversed the eastern part of Central Celebes, having first visited the districts of Ranpi and Leboni at the southern tributaries of the Koro.

Two years later, in 1913, the Salvation Army opened a mission in Koelawi the first manager of which, a Dutchman mr. J. Loois, has bestowed a great deal of work on the study of the native language of Koelawi, the so called »moma». Moma is the negation which in Central Celebes always is

used as name of the language. Another mission was opened by the Salvation Army in Kantewoe in 1918. The first missionary was an Englishman Mr. Woodward who has, beside his missionary work, studied the native culture, and especially the language, the «oema».

The scientist next after Grubauer who visited the mountain districts of the North-west was an American, Mr. Raven, making zoological collections in Lindoe, Koelawi, Gimpoe, Bada, and Behoa.



Map 4. Settlements in NW. Central Celebes.

W. Kaudern.

## Settlements.

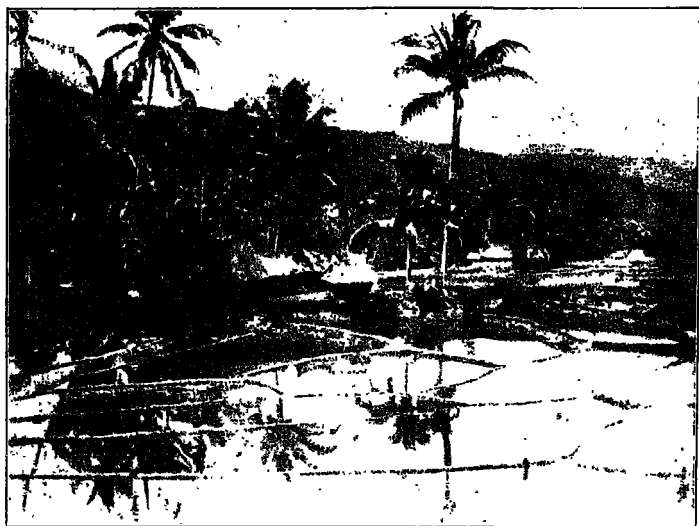
(Map 4)

As before mentioned the population of NW. Central Celebes is severed into a great many small tribes, settled partly in the valleys, especially the valley basins, and partly on the high mountains. Thus there are two quite different kinds of settlements: those in the plains and those in the highlands. Transitions between the two are also found as for instance Kantewoe, being situated in the highlands but never the less surrounded by a gently sloping ground, used by the natives for cultivating paddy.

The different kinds of settlements of course are intimately connected with the tillage of the ground, and very likely depending on it. In the plains, the paddy is grown in wet fields, in the Koelawi and the Kantewoe languages called *lida* (Fig. 16), in the highlands on grounds cleared with fire, in the Koelawi language called *bone*, in the Kantewoe language *bonea*.

The plains of the valley basins being comparatively small, the settlements give the character of a whole, with villages sometimes so close to one another, that the distance can be performed in a few minutes.

On the contrary, a tribe living in the highlands is scattered over a much larger territory, living in villages rather distant from each other. The district of Tobakoe for instance is cut into two parts by the Koro, one in the north and one in the south. But even these parts do not give the character of a whole, since the distance between the villages is so great that it is a good day's walking from Lawe, the village furthest in the SE., to Siwongi, the principal village situated in the west. Every village is situated on the top



W. Kaudern Photo.

Fig. 16. Rice fields rear the village of Soengkoe in Koclawi when the young plants are set.



W. Kaudern Photo

Fig. 17. The village of Biro in Tobakoe, situated on the top of a ridge, jutting out toward the Koro.

of a ridge shooting forward toward the Koro, on both sides bordered by the deep valleys of the tributaries of the Koro (Fig. 17); Thus every village forms a little cultural sphere of its own rather independant of its neighbours. Such a village is surrounded by the »bonea», situated on the upper, rather even part of the ridge. Further down, the slope is too steep to allow cultivation. Here we often find the primeval forest as well as on the highest ridges.



W. Kaudern Photo.

Fig. 18. Smithy in Lindoc.

All settlements have one characteristic in common: there are always villages the houses of which are comparatively well built, and every village of importance has a temple.

As the fields surrounding a village many a time are rather extensive, the natives usually build some houses in the »lida». Sometimes these structures are just as carefully made as those of the village itself. Even at the far off »bonea» we often find a little house although rather primitive.

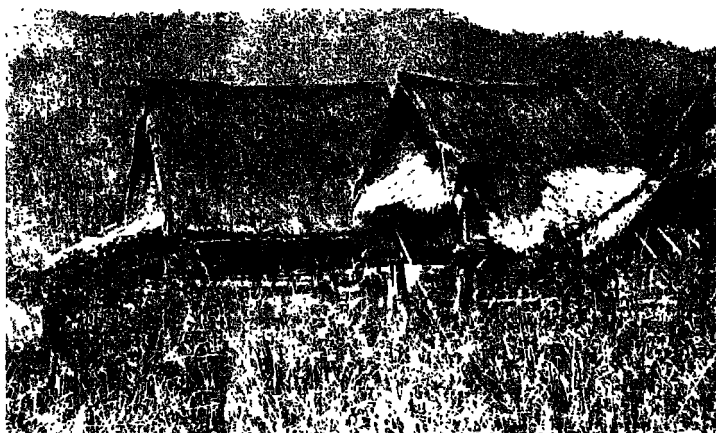
Beside the dwelling-houses there are a number of barns



for keeping the paddy. These paddy barns we find in the villages as well as in the neighbourhood of the rice fields.

In some village or other we also may find a shed serving as a smithy (Fig. 18), or a shed used by women beating the paddy or maize, or making their cloth of bast.

According to Kruijt the number of houses of the villages of the Poso Toradjas formerly was rather small, varying from 2 to 10, with 40 to 200 inhabitants. Each house



W. Kaudern Photo.

Fig. 19. The village of Banggakoro. Old village on the left bank of the Koro.

was occupied by more than one family, and consequently rather big. In the NW. part of Central Celebes where as a rule each family in the village has a house of their own, the number of the houses naturally is greater than by the Poso Toradjas. In the following table is given the number of houses in some villages at the time of captain Boonstra van Heerdt, and in 1918 when the author of this book stayed in these districts, showing that nearly all these old villages had a rather great number of houses (10—30).

District:	Village:	1918			1911		
		Tempel	Houses	Paddy-barns	Tempel	Houses	Paddy-barns
Koelawi	Bolapapoe	1	a. 30	—	—	—	—
	Panapa	—	a. 20	—	—	—	—
	Boladangko	1	a. 20	—	—	—	—
	Soengkoe	1	a. 20	—	—	—	—
	Mataoe	1	a. 15	—	—	—	—
Tamoengkolowi	Tikala	1	19	—	—	—	—
Toro	Main village	1	17	—	—	—	—
Tobakoe	1) Tipe	1	11	—	—	10	—
	Towocloe	1	a. 20	—	1	11	—
	Siwongi	1	a. 20	—	—	—	—
	Biro	1	8	—	1	7	—
	2) Kaloeke Toea	—	—	—	1	18	—
	3) Kanoena	—	3	—	—	14	—
Banggaiba	4) Lawe	1	11	—	1	19	—
	5) Banggakoro	—	4	—	—	4	—
Tole	Pantalawi	—	—	—	—	5	—
	Wliri	1	a. 10	—	—	10	—
	Kilo	—	a. 6	—	—	—	—
	6) Poraelea	1	8	—	—	a. 20	—
	7) Pangana	1	10 + 16	—	—	—	—
	Tompi	—	—	—	1	a. 20	—
	Kantewoe	1	28	—	—	—	—
	Peana	1	a. 40	—	—	—	—
	Benahoe	1	25—30	—	1	a. 30	—
	Mapaha	—	4	—	—	—	—
Lindoe	1) Lindoe Island	Iwongko	1	8	—	—	—
		Pinalali	—	1	—	—	—
		Palego	—	6	—	—	—
		Bolabooc	—	7	—	—	—
		Langko	1	a. 30	—	15	Several
		Tomado	1	23	15	—	—
		Antja	1	30	25	—	—
		2) Oloe	—	—	—	6	—

1) The village abandoned, several houses in a state of decay (1918).

2) Of this village there were only the fragments of two houses to be seen (1918).

3) The village abandoned in (1918). Some years before the village was said to have had a temple.

When we study the two tables, we find in some villages a rather big difference in the number of houses at present, and at the time of captain Boonstra, owing to the endeavour of the Dutch Government to make the natives leave the highlands, and come to live in more accessible districts. Sometimes the Government ordered the natives of a small village to move to a bigger one in the neighbourhood in order to keep the population together.

But even before the Dutch came to Celebes, many villages changed considerably. The consequence of the constant fights was that many a village was abandoned. Sometimes an epidemic has reduced the number of the inhabitants of a village, or an earthquake has in exceptional cases destroyed a village as was the case in 1909 with the village of Lemo in Koelawi. The new village that was built instead of the old one, has obviously been influenced by modernism, and does not look like a genuine Koelawi village (Figs. 20, 21).

From the table it is evident that the paddy barns as a rule are not found at the villages. Only at the villages of Tomado and Antja in Lindoe there are paddy barns among the dwellings. The same is the case in Bada, and probably also in Napoe. Considering that Lindoe has been influenced by these two districts especially as to the construction of the houses, the habit of placing the paddy barns at the villages has very likely come from the same place. It is not likely that this custom should have originated in Lindoe,

<sup>4)</sup> Abandoned, part of the houses were decayed in 1918. Later informations tell that the village is again inhabited and rebuilt.

<sup>5)</sup> In 1918 the village consisted of 4 rather new houses on the right bank of the river and of 4 miserable houses on the left bank (Fig. 19). Only the latter were inhabited, the natives having for some reason or other left the new village.

<sup>6)</sup> The houses of the village falling, abandoned in 1918.

<sup>7)</sup> 16 houses belonged to the part of the village that was abandoned.

<sup>8)</sup> These four villages were only inhabited at the time of certain feasts.

<sup>1)</sup> According to Kruijt 1897.



W. Kaudern Photo.

Fig. 20. The village of Beladangko in Koelawi.



W. Kaudern Photo

Fig. 21. The village of Mataoee in Koelawi.

because at the very old abandoned villages on the Lindoe Island there are no paddy barns at the villages.

The native house building is performed without any other tools than a big chopping knife by means of which the trees are cut down, the bark is cut off, the trunk cut into planks and boards. Not a single nail is used. Everything is joined by means of notches, or tied together with strips of ratan. These bindings are as a rule not seen in the following figures.

## The native structures in N W. Central Celebes.

The structures of the natives in the N W. part of Central Celebes seem at a superficial examination to be more or less of the same construction, but if they are closely studied we shall find that the difference between the houses as well as between the temples is considerable, a difference which often can lead to conclusions concerning the relationship of the tribes as well as give us an idea of the foreign cultures which have gained a footing among the natives in the districts in question. This is however not applicable to the very simplest structures, those which the natives temporarily put up as a shelter for a night or two, or to the sheds which are found here and there at the foot-path between two villages which are so far from one another that the distance cannot be performed in one day. These occasional structures are about the same, whether we find them in the primeval forest of Mongondou in North Celebes, in the mountains of Central Celebes or far away in the wilds of East Celebes.

## Temporary structures.

### Shed A.

The very simplest lodgings for the night are made of four branches, or of poles, put two at each end in the ground, crossing at top. Two or three big palm leaves, resting in the crossings, make a roof, and the «house» is ready for use (Fig. 22 A).

Along the paths, especially in the forests, we often find such sheds but of miniature size. They are meant for the evil spirits. When for instance the sound of an ominous bird strikes the ear of a native, he is afraid that there is some malignant spirit threatening him with his wickedness. Then he stops. Out of a number of sticks and a couple of palm leaves, cut into pieces about one foot in length, he makes a little house for the spirit. Inside it he places a small heap of sticks, meant for fuel, and then he makes an offering of some betle and tobacco and preferably of a number of his own hairs, pulled out in a hurry. Then he utters a spell, hoping that the evil spirit will give up the pursuit and take possession of the little house.

### Shed B.

At public halts as well as at places where the natives stop to sleep when they travel between the villages, they as a rule put up a number of sheds which, although very simple, still are made with much more care than those above mentioned. Now and then they are repaired, or new sheds are put up in stead of old ones, fallen into decay (Fig 22 B).

This shed has a two-sided sloping roof of loose palm leaves or of *alup*<sup>1</sup>, fastened to a simple frame, which is sup-

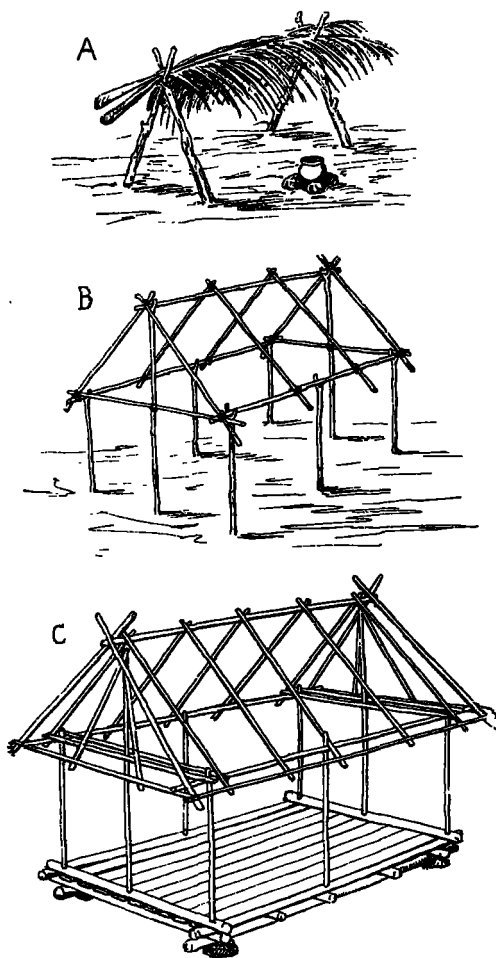


Fig Different kinds of sheds in NW. Central Celebes.

<sup>1</sup> *Alap* (Fig. 23) is a malay word which means not only a special kind of roofing but also roof. The leavlets of the palm trees, being detached from the stalk, are folded and put over a small bamboo lath of about one meter in length. Then they are tacked together close to the bamboo



ported by 6, 8 or 9 poles, hammered down into the ground. The construction of the shed is made clear by Fig. 22 B.

In a shed as simple as this the native has to sleep on the ground which is rather disagreeable in a wet climate. That is why he very often improves the shed by making a bunk or even a whole floor of sticks. The bunk or floor is placed ei-

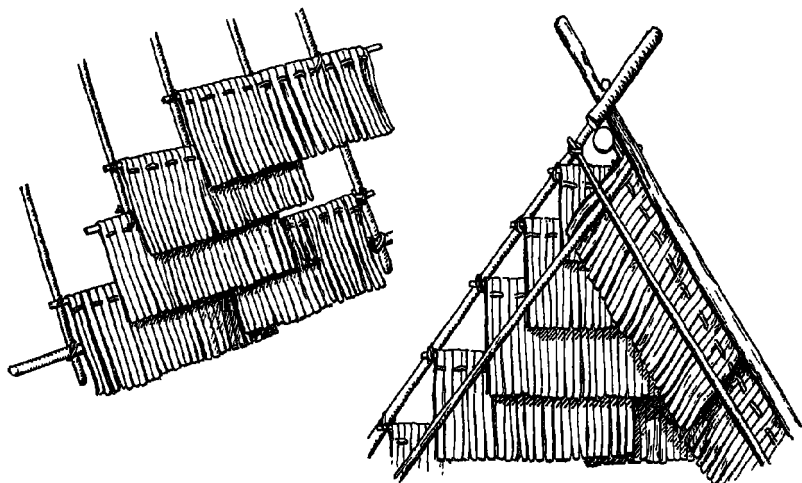


Fig. 23. Atap, roofing made of palm leaves; to the left, from the side of the roof, to the right, from the gable.

ther on long poles, fastened to the upright poles, or it rests in the fork of special poles, driven down into the ground.

These simple sheds are often found not only at halting places but also at the villages where they are used for different purposes. At Kantewoe, Banggakoro and some other places the natives put up this kind of shed where they beat their paddy to remove the chaff.

lath with a thin strip of ratan. The best atap is made of the leaves of the *nipa* palm and the *niboeng* palm. In this part of Celebes atap of the former kind is probably only found in the neighbourhood of the village of Toewa in the Paloe Valley, because the *nipa* palm does not grow in the mountains. The closer the ataps is put to each other the more watertight and the more durable the roof.

At many places in Pipikoro the women have such a shed where they, protected against rain as well as against the burning sun, can beat their cloth of bast. Just outside the village of Towoeloe in Tobakoe the natives have put up a big shed of two stories where the women of that village gather to work at their bast-cloth. In the village itself it



O. Strandlund Photo.

Fig. 24. Shed in the mountains between Gimpoee and Kantewoe, used as night quarters.

was not customary to do that kind of work since the shed had room for no less than 14 women.

In each village or district there is as a rule a shed used as a smithy (Fig. 18).

### Shed C.

A further improvement of the shed is placing it on a foundation of horizontal poles. Then the poles which support the roof need not stand in the moist ground, where

they gradually decay (Fig. 22 C). In some sheds the roof extends a bit beyond the poles which form its support.

Sometimes the foundation only consists of 4 rather thick poles put in a square, two by two, but as a rule there are 8 poles in four layers. Across the poles next to the top layer, another pole, or a number of poles are placed between the gables, supporting a floor of bamboo laths or of a kind of boards, made of the trunk of the *niboeng* palm the outward coat of which has been peeled off and made flat.

If such a shed is meant to be used for some time the poles of the bottom layer do not rest on the ground, but each pole is placed on two or three stones. Occasionally the foundation is made of logs and then the shed becomes almost identical with the open paddy barn.

## Paddy-barns.

In the NW. part of Central Celebes there are two kinds of barns. One of them, the so called *paningkoe*,<sup>1)</sup>

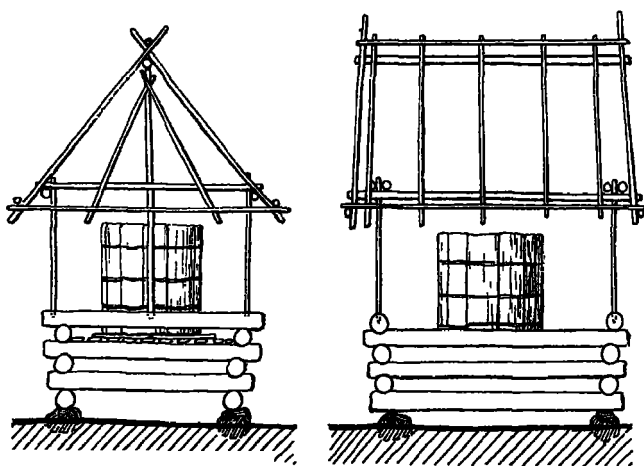


Fig. 25. Paningkoe (paddy barn) from Koelawi.

which is of a rather simple construction, I have particularly observed in Koelawi. It corresponds closely to the above described shed. The difference is that the foundation of the *paningkoe* as a rule is made of logs. It has more or less the form of a square, and the roof is supported only by 6 poles at the gables. In the center of the floor in this house

<sup>1)</sup> Kruijt says that *pangkoe* is among the Bare'e Toradjas a temporary paddy barn, built at the rice fields in case of much rain, before the paddy is brought to the village. According to him the simpler paddy barn of Koelawi is called *mari*, a word that I never heard.

without walls there is a big cylinder, of the same material as the floor in which the paddy is kept (Fig. 25).

The other barn the construction of which is much more complicated, is the most common type in N W. Central Celebes. It is called *gampiri*. It looks rather queer,



After P. and F. Sarasin  
Fig. 26. Paddy barn or *gampiri* from Koelawi.

because there are no walls, but the roof comes down to the floor which rests on a rather ingeniously constructed foundation.

It consists of 8 more or less flat stones put on edge with their flat sides turned against each other. They are placed by pairs in a square, the lower part of them being in the ground to make them steady. On the top of these stones two big planks (a in 27 A and 27 E) are placed so that each plank rests on four stones, standing crosswise to

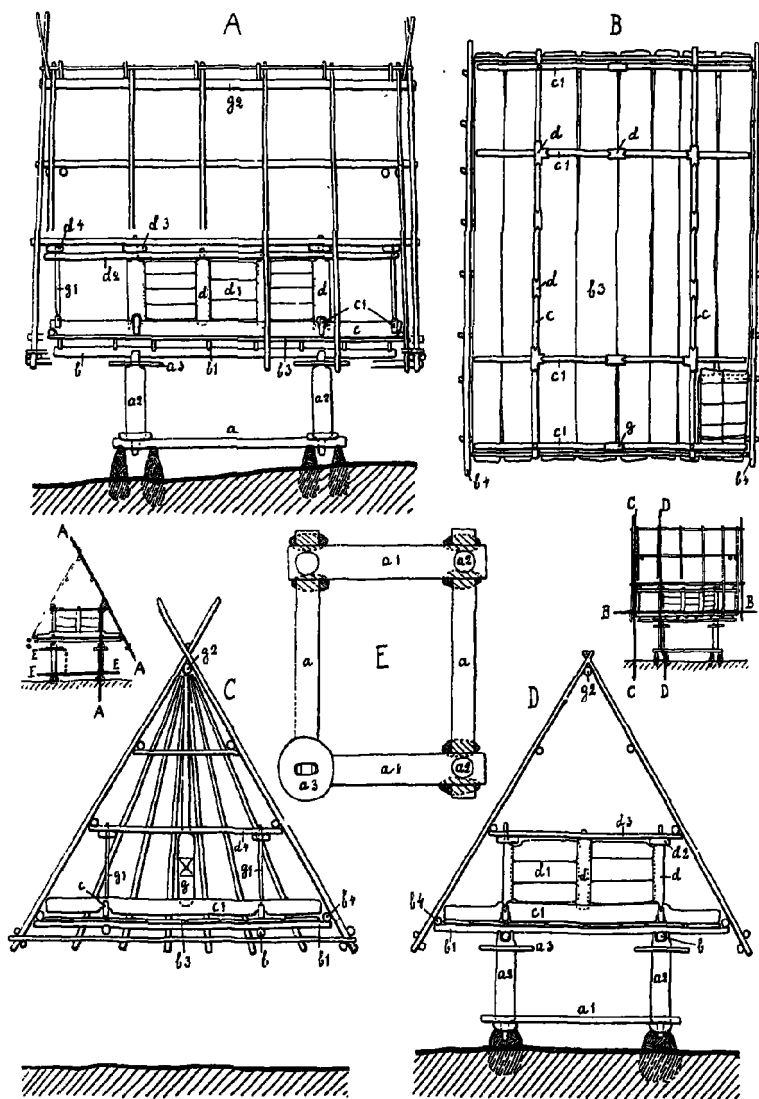


Fig. 27. Gaupiri (paddy barn). a— $a^2$ : foundation; b— $b^4$ : floor; c,  $c^1$ : floor frame; d— $d^4$ : walls; g— $g^2$ : roof-truss.

The miniature drawings show the place of the sections A—D.

1:100.

the plank. The underside of the plank as a rule is the rough trunk which is notched out in order to make the stones fit in and give steadiness to the planks. The upper surface of these planks is cut smooth like all the rest of the planks in a *gampiri*.

Across the two bottom planks two other planks are placed just at their end. They are cut out a bit so as to fit in with the bottom planks. They are placed right over four stones, two at each end, the flat side of the stones being parallel to the planks of the second layer (Fig. 27 a<sup>1</sup>).

On the top of this frame 4 poles of about 1 m. in height are set up, one at each corner of the frame (Fig. 27 a<sup>2</sup>). In the planks of the second layer there is a round hole made for the bottom of the poles, thus resting on the two bottom planks in order to increase the stability of the house. The point comes out between two stones.

The top of the poles is cut out into two taps round which is placed a round, flat piece of wood of about 85 cm of diameter. The hole in the center is oval or oblong which prevents the plate from sliding down the post (Fig. 27 a<sup>3</sup>). These four plates form an insurmountable hindrance to the numerous rats that would otherwise climb the house and eat the paddy.

On the top of the four upright poles two long, rather thick poles are placed in the lengthwise direction of the *gampiri* (Fig. 27 b). They are pushed down between the two taps at the top of the posts in the corners, and they support the hole house. The length of the floor will be the same as that of these poles. Right across them are put a number of roughly hewn poles (Fig. 27 b<sup>1</sup>), more high than broad, on the top of which the floor is placed. Very often it is made of boards of *niboeng*, running in the lengthwise direction of the house (Fig. 27 b<sup>2</sup>).

In a corner of the floor an opening is left as entrance. It is simply covered by a shutter of *niboeng* or slit bamboo. The long sides are bordered by two poles, placed outside

the *niboeng* planks (Fig. 27 b<sup>4</sup>). On each short side there is a pole placed on the top of these planks.

On the floor 6 planks are placed so that they form a rectangular frame in the middle of the barn. Two long planks are put between the gables right above the corner poles of the foundation and the poles resting in their fork (Fig. 27 c). The other four planks (Fig 27 c<sup>1</sup>) are placed two at the gables and two a bit inside, right over the poles (Fig. 27 a<sup>2</sup>). By means of notches they fit in with each other very firmly, which is necessary as they are meant to support a great number of upright planks and poles.

On this frame are built walls, a little more than 1 m. high. They are made of 10 upright planks, one plank at each corner, one in the middle of each short side and two at the long sides (Fig. 27 d). These planks have at the bottom a tap, fitting in a hole in the frame plank. At both sides of the upright planks there is made a score which makes it possible to push down thin boards between them (Fig. 27 d<sup>1</sup>), filling up the empty space and forming the walls.

At the top of the upright wall planks there is a tap, fitting in a hole in the overlaying plank. In the lengthwise direction of the *gampiri* two planks (Fig 27 d<sup>2</sup>) form the completion of the long wall. Across these two planks are placed two other planks (Fig 27 d<sup>3</sup>), forming the upper part of the short sides.

The planks at the gables carry three supports, the one in the middle being at the bottom flat but becoming in its upper part round and thin (Fig. 27 g). This pole comes up to the ridge where it forms the support of the ridge pole (Fig. 27 g<sup>2</sup>). The other two supports are placed right above the two long planks of the wall frame. Their top is pushed through a hole at the end of the planks which form the uppermost part of the long walls of the room in the middle of the barn. They are also kept by a plank at the gable (Fig. 27 d<sup>4</sup>), put on their top. This plank has as well a hole in its middle for the pole, which goes up to the ridge.



The roof as well as its gables come down as far as to the floor of the *gampiri*.

The construction of the framework of the roof is made clear by the figures 27 A, 27 C. All poles and planks are joined where they meet by means of notches and by strips of ratan or some other material. The roof is covered with *atap*. In order to make it more resistant to rain, the *atap* is covered by a layer of *idjoek*, a kind of black fibre, like horsehair, which is found in the sheaths of the leaves of the sago-palm.

The *gampiri* is inside quite dark as there is no window. The long walls of the room in its middle come up to the sloping roof, the short walls end freely and leave the room open up to the ridge. The room is entered by means of a small ladder.

Round the room there is a passage, just so broad as the part of the floor, which projects beyond the foundation. This passage is of course quite low at the long sides where it is closed in by the roof.

In this room the natives keep their paddy, and in the passage they very often deposit baskets, mats, brass bowls, so called *doela*, and other household utensils which are not used every day.

All the *gampiris* of the highlands in N W. Central Celebes are built like the one I have just described. However we now and then may find a *gampiri* the room of which occupies one half of the house. More seldom the room runs from one gable to the other. Then as a rule it is divided into two parts one of which has incomplete walls to make it possible to enter from the passage.

In the districts of Bada and Behoa the paddy barns generally are much bigger than in Koelawi and Pipikoro. Here the foundation has a floor of its own, made of planks, resting on the planks at the bottom of the foundation. *Gampiris* like these are also to be found in Lindoe and especially in Toro where their dimensions remind one of Bada and Behoa.

In Koelawi, Lindoe, and Pipikoro the roof of the barns always seem to be covered with *atap* but in Bada and Behoa it is more common to use a kind of shingles, 2 feet long, made of big, slit bamboo.

The *gampiri* has generally no real ornaments. Now and then the point of the gable rafters is carved in the shape of an animal's head, perhaps that of a horse. At the end of the long bars which form a support to the rafters, there are loose, pointed sticks standing out at the gable.

In the Paloe Valley north of the mountain districts in question, I never saw any barns like those in Koelawi and the other districts. I regret to say that I had never the opportunity of measuring any barn in the Valley. The construction reminds me however of that of the 3:rd housetype of Koelawi (Figs 48—53). This barn which I found particularly in the southern part of the Valley, has no special foundation. The 4 poles at the corners come up as far as to the roof. One meter and a half above the ground there are cut out holes through which are thrust 4 planks, forming the support of the floor. This barn has walls. At each side just between the poles at the corners there is an upright plank along the edge of which are made furrows. Between the poles and the planks pieces of *gaba gaba*<sup>1</sup>) are pushed down in the same manner as in the *gampiri*. The only difference is that in the latter wood is used instead of *gaba gaba*. On the top of the walls there are 4 planks to keep the whole together and make it solid. They have holes, that fit in the taps of the corner poles and of the upright planks. The entrance as a rule is at one gable. The two-sided roof of *atap* projects very little beyond the walls.

<sup>1</sup> Gaba gaba is the malay word for the stalk of the sago palm's leaf. At the bottom the stalk is as thick as a man's arm. It can be split into thin boards, and being easily worked it is used for many purposes, for instance as building material.

## Dwelling-houses.

The dwelling-houses of the districts which I have studied are of several different types with some variations.



W. Kaudern Photo.

Fig. 28. House in Koelawi of type A.

### Koelawi type A.

In Koelawi there are three quite different types, the least complicated being in its construction much like a *paningkoe*. This house has for its foundation at the bottom logs, placed by twos, as a rule in 6 layers (Figs 29, 30 a<sup>1</sup>—a<sup>6</sup>). The bottom logs generally are put at the gables. Across the two long logs of the top layer are

placed 4 bars, the two at the gables being somewhat bigger than the other two (Fig. 29 a<sup>7</sup>). On the top of this layer are placed two long bars which are thinner than those of the layer below (Figs 29, 30 a<sup>8</sup>). They are placed along the sides of the house and project a bit beyond the foundation. On the top of them there are a number of bars (Figs 29, 30 b), serving as support to a great number of laths, placed at a distance of about 2—3 cm. from each other in the lengthwise direction of the house (Fig. 30 b<sup>1</sup>). They are made of the trunk of the niboeng palm or of strong bamboo. On the top of them there is a second layer of bamboo laths with an interspace of 2—3 cm. (Fig. 30 b<sup>2</sup>). These laths are fastened to the bottom laths by tiny ratan strips. In the middle of the floor an open space is left for the fireplace.

The bottom of the fireplace is made of some short planks (Fig. 30 f), put on the top of the 2 middlemost poles a<sup>7</sup>. Round the bottom are put 4 planks on edge (Fig. 30 f<sup>1</sup>), forming a square box. The bottom of it is covered with *idjoek*, and on the top of it there is a layer of earth and sand. In the middle of the fireplace are three small stones, meant as support for a pot.

A frame of 4 rather big bars is placed on the floor, two at the gables and two at the sides (Figs 29, 30 c, c<sup>1</sup>). In these bars are made holes for the poles or posts which support the roof. As a rule they are 10 (Figs 29, 30 g). The middle post at each gable comes up to the ridge the bar of which rests on its top. The other 8 poles are placed one at each corner and two at each long side. There will thus be 4 poles along each side. They are sometimes joined at the top by a long bar, tied to them by means of ratan strips, but usually there is a plank (Figs 29, 30 d) with four holes in it fitting in the pointed ends of the poles. At each gable there is another plank (Figs 29, 30 d<sup>1</sup>) with three holes, the middle hole meant for the high ridgepost, the two side-ones for the poles at the corners.

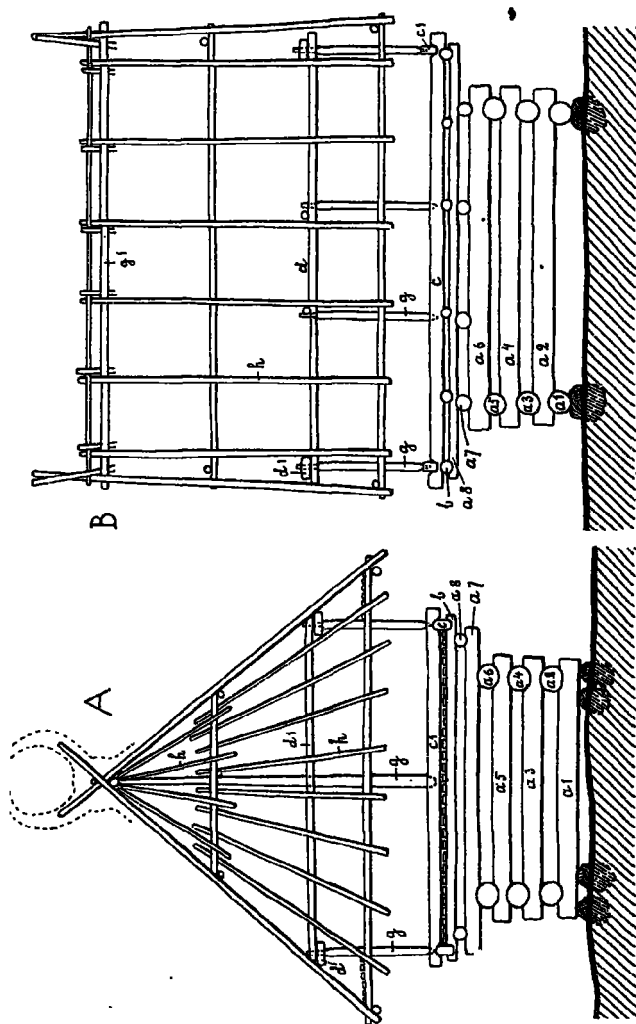


Fig. 29. Koclawi house of type A. a<sup>1</sup>—a<sup>4</sup>: foundation; b: beams of the floor; c, c<sup>1</sup>: floor frame; g, g<sup>1</sup>: roof truss; d: rafters.

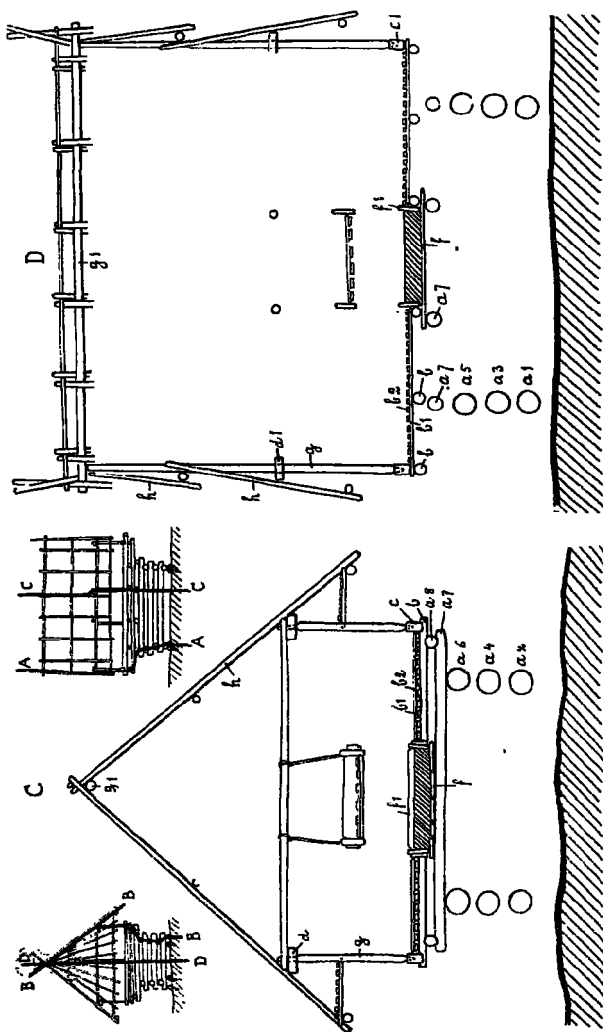


Fig. 30. Koelawi house of type A.

a¹—a⁴: foundation; b—b²: floor; c, c¹: floor frame; d, d¹: wall frame f, f¹: fireplace;  
g, g¹: roof-truss; d: rafters.

The miniature drawings show the place of the sections A—D.

In this way we have got the frame of our house. At the ridge bar (Figs 29, 30 g<sup>1</sup>) and the two just mentioned long side planks, the rafters (Figs 29, 30 h), very often made of bamboo, are fastened. They project a bit beyond the house, and are at the bottom of the roof joined by a long bamboo. In all places where rafters cross this bamboo, the planks, and the ridge bar, they are tied to them by strips of ratan.

At the gables there are some rafters which do not run from the ridge to the bottom of the roof but are made in two pieces, the top ones coming out a bit beyond the bottom ones. There is a cross-bar, fastened to the ridge post, which forms the support of the gable rafters. The construction of the roof can be seen in the figures. The roof is covered with *atap* and *idjoek*, the latter kept in place by pointed sticks, put in from the sides of the ridge through the roof, so that they project a bit at the other side. Between these sticks a rope of *idjoek* is twisted up and down the ridge;

The *idjoek* which covers the ridge, ends at the gables in a big brush, at the bottom of which the two outermost rafters cross. These are covered with *idjoek* and given the shape of a pair of horns the points of which meet. Just below the big *idjoek* brush there is a bundle of *idjoek* hanging down the gable. The natives declared this arrangement as representing a buffalo's head (Fig. 29 A).

The walls which do not come up to the roof but end at the level of the bottom edge of the roof are made of a plaiting of slit bamboo (Fig. 31).

There are no windows in this house, but many times half part of the side wall or the hole wall is made like a shutter the top of which is tied up by ratan strips, leaving the bottom free to be kept open by means of a couple of sticks (Fig. 28).

The door is always placed near the corner at one of the gables. Sometimes it is made of a broad plank, but very

often it is much simpler. It may for instance be made of plaited bamboo, fastened to a wooden frame. Sometimes there is not even a frame, but a bamboo screen is simply put before the entrance. When the native leaves his house, such a door is simply shut by a stick, pushed through a loop in the middle of the door. The ends of this stick press against the door-posts.

Between the side-walls and the bottom of the roof a shelf is made of narrow laths. Sometimes the roof comes out so far beyond the gables that there is room for another shelf.

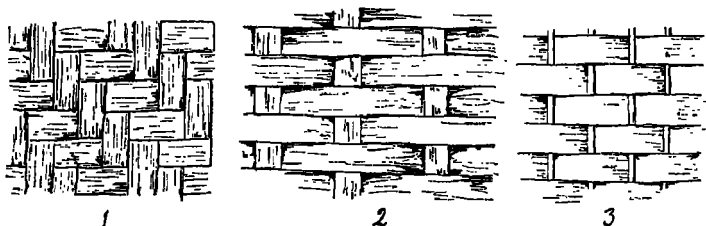


Fig. 31. Bamboo plaiting, used for house walls in NW. Central Celebes. 1: the most common type; 2: plaiting found in Benahoe and at the village of Kanoena in Tobakoe; 3: rather common at the village of Siwongi.

This kind of house never contains more than one room. Above the fireplace hangs a square box, the bottom of which is made of laths (Fig. 30 C, D). In this box wood is piled up to dry, or it is used to store up dry or smoked meat or fish. Fastened to the box there is often hanging a basket of ratan for wooden spoons. To enter the house there is a common ladder, or some steps, hewn out of a log.

As a rule these houses have no veranda, at least not in Koelawi.

This type of house is also found all over Pipikoro, but now and then with small variations. In Tole for instance the floor as well as the roof project so far that there is a veranda on a level with the room. The front part of the



veranda is supported by a special foundation as can be seen in Fig. 261:3.

The plaited bamboo in Koelawi is as a rule the same which is found all over the Dutch East Indies (Fig. 31:1). However I have noticed other methods of plaiting bamboo at different places in Pipikoro.



After P. and F. Sarasin.

Fig. 32. House at the village of Oentoe in Gimpoe, of the so called Koelawi type B.

### Koelawi type B.

The second house type from Koelawi is of much more solid construction than the house I have just described. It has wooden walls, and the foundation is made in quite another way.

These houses predominate in all the oldest villages such as Soengkoe, Mataoe, Boladangko, Panapa, and Bolapapoe.

Here the foundation does not consist of a number of logs, placed two and two in several layers, but is more like the foundation of a *gampiri*. The walls too resemble the walls of the room in the *gampiri*.

At the bottom of the foundation there is a frame, resting on a number of stones, put on edge and placed by twos at each corner of the house. But the house, being much longer than a *gampiri*, it is necessary to put a stone in the middle of the long side.

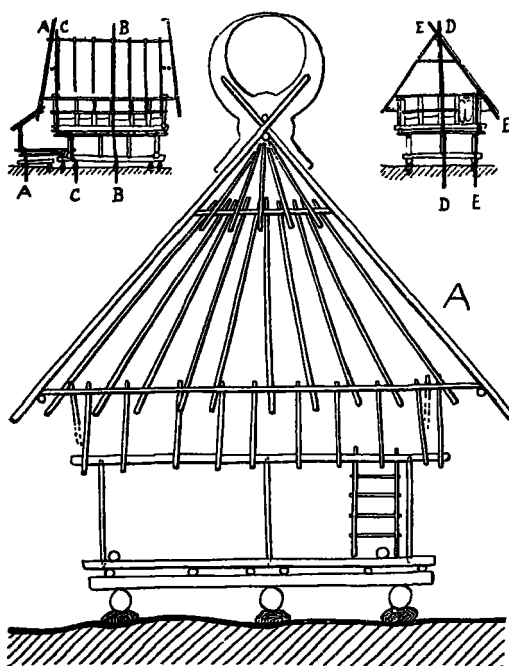


Fig. 33. Koelawi house of type B. The gable where the veranda is built. The miniature drawings show the place of the sections A-D.

On the five stones is placed a log (a in Figs 34, 35) in which there are cut out five notches, so as to make it fit in the stones below. Near the end of these logs another log is placed. Where the logs cross, both are notched out so as to be firmly held together.

On the top of this frame there are 10 poles, one at each corner, one in the middle of the gable and two at the sides (a<sup>2</sup> in Figs 34, 35); at the bottom there is a tap to fit in a

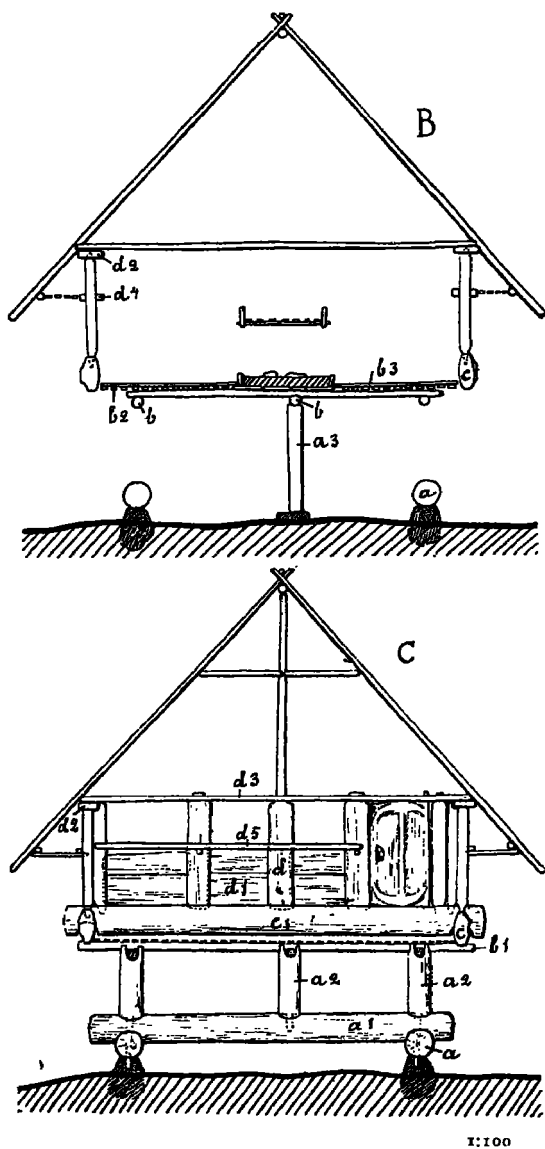


Fig. 34. Koelawi house of type B.  
 a— $a^3$ : foundation; b— $b^3$ : floor; c,  $c^1$ : floor frame; d— $d^6$ : walls.

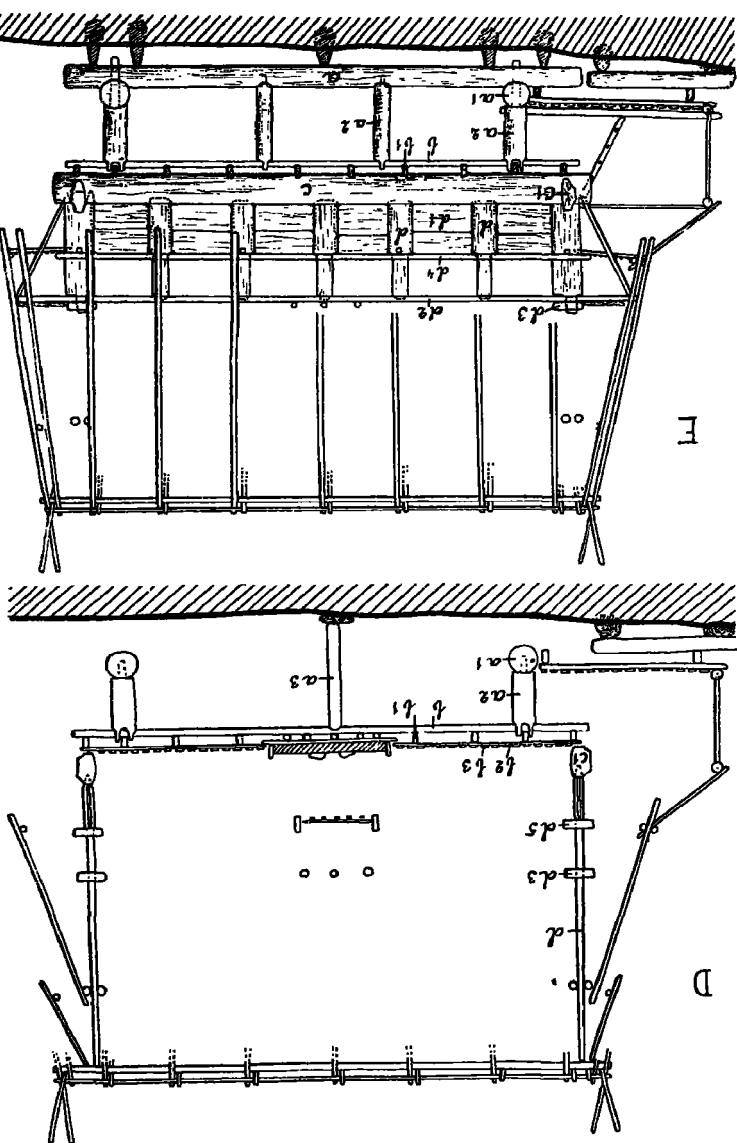


Fig. 35. Koelawi house of type B.  
 a—<sup>a1</sup> foundation; b—<sup>b1</sup> floor; c—<sup>c1</sup> floor frame; d—<sup>d1</sup> walls.

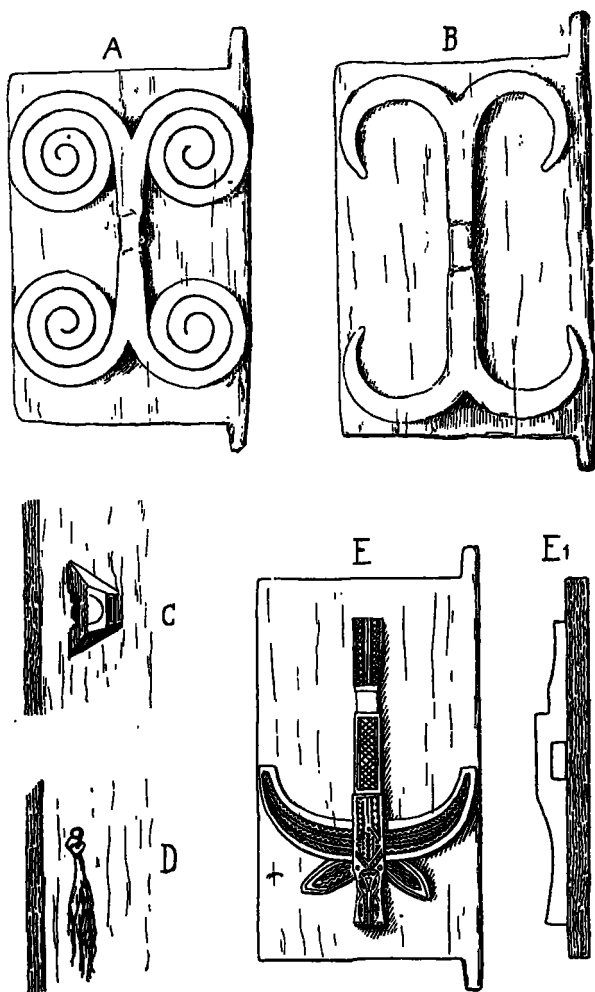
1:100

hole in the logs below, just as in a *gampiri*. The tops of the poles are forked, and the 4 poles of the sides keep in place a bar as thick as a man's arm (b ins Figs 34, 35). The pole in the middle only rests on the 2 gable poles. In order to increase its bearing power, a special prop is as a rule put under in the middle of it (a<sup>3</sup> in Figs 34, 35). This prop is placed on a flat stone on the ground. Across these three bars, 10 or 12 bars are then placed (b<sup>1</sup> in Figs 34, 35). They are so long that they project beyond the layer below. They carry a frame of 4 heavy planks (c, c<sup>1</sup> in Figs 34, 35) as well as a great number of pinang laths, on the top of which is a layer of bamboo laths with interspaces of 2 or 3 cm (b<sup>2</sup>, b<sup>3</sup> in Figs 34, 35). The floor is thus quite the same as in the former house type. Above the fireplace, constructed in the same manner as in the previous house, there is the box with its bottom of laths for drying various things.

The walls are made in quite the same way as the walls of the room in a *gampiri*. The number of the upright planks (d in Figs 34, 35) being somewhat bigger, the number of the wall panels naturally increases. The tops of the poles are kept together just as in a *gampiri* by a frame of 4 planks (d<sup>2</sup>, d<sup>3</sup> in Figs 34, 35). Those of the sides are comparatively long and project beyond the gable wall. Between the upright planks are pushed down 2 boards (d<sup>1</sup> in Figs 34, 35). On the top of the walls there is a frame of 4 planks (d<sup>4</sup>, d<sup>5</sup> in Figs 34, 35).

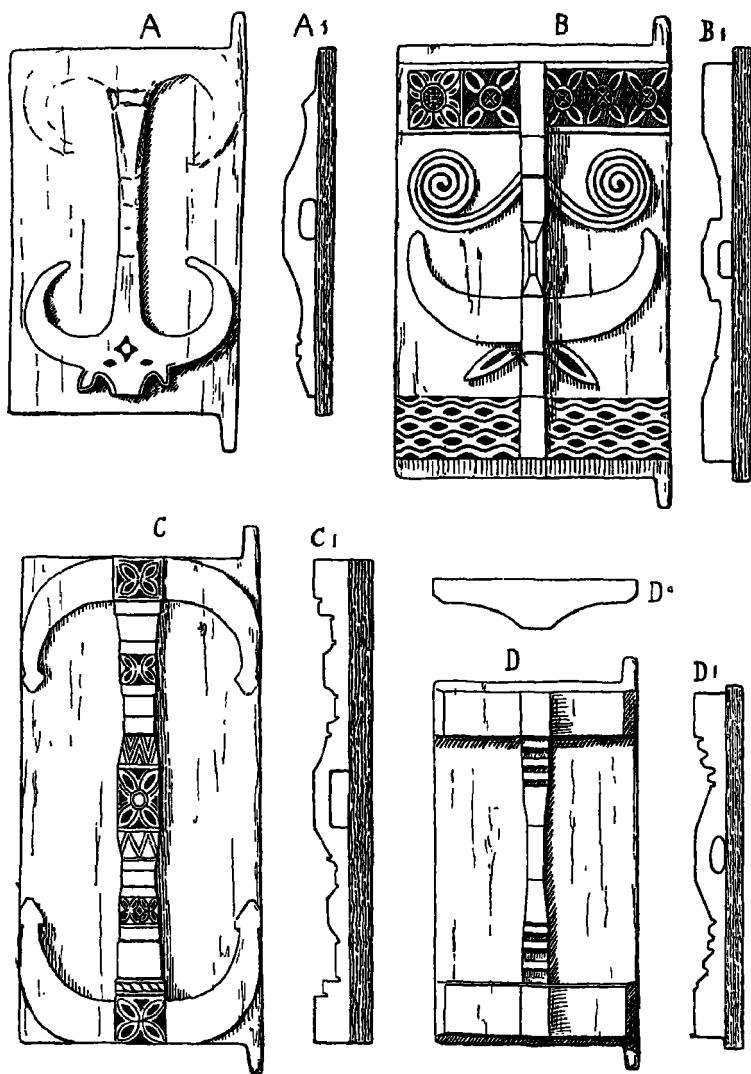
The door is usually placed at one gable near the corner. It is made of a very broad plank and can be turned on two taps, one at the top and one at the bottom. The outside is very often adorned with carvings in the shape of buffalo horns. The handle can either be placed in the middle of the door or at one side (Figs 36, 37). Sometimes there is no proper handle but a hole at one side through which is put the hide of a buffalo's tail. A knot is made on each side of the hole, and the tail tuft hangs down at the front (Fig. 36 D).

The construction of the roof is the same as in the previous house. The only difference is that the gable posts



1:20

Fig. 36. Doors from NW. Central Celebes.  
 A from Toro; B from Koelawi; E from Kantewoe, but originally from Pada in the SW; C door-handle from Poraelea; D a buffalo's tail used as door-handle.



K:20

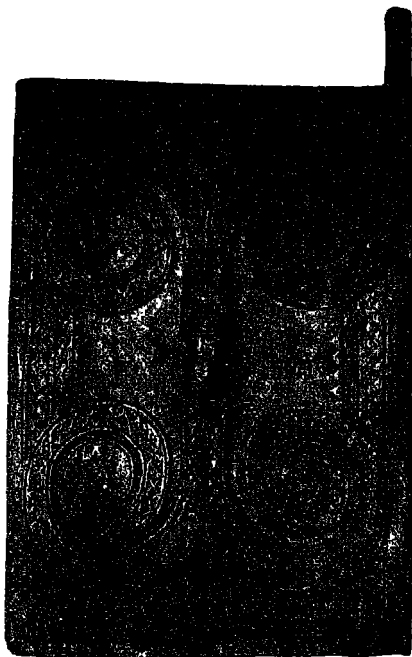
Fig. 37. Doors from NW. Central Celebes.  
 A, A<sub>1</sub> from Kantewoc; B, B<sub>1</sub> from Peana; C, C<sub>1</sub> from Siwongji; D, D<sub>1</sub> from Biro.



which carry the ridge bar, are of the same width at the bottom as the upright wall planks (d in 34 C, 35 D).

This house has also a shelf of laths, not only at the sides but often at the gables as well.

The gables are either adorned in the same manner as in the previous house, or the outermost rafters have the



After A. Grubauer.

Fig. 38. Door from Koelawi, adorned with wood carving.

form of a plank the top of which is carved in the shape of an animal's head (Fig. 42:1, 2). Sometimes we find an odd lath at the top of the gable, one end carved like an animal's head, or like a tail. Projecting beyond the edge of the gable we sometimes find crudely carved laths.

At the gable where the entrance is situated, there very often is a veranda the floor of which is not on the same

level as the floor of the house, but considerably lower. As a rule this veranda is an independent construction, added to the house. It resembles very much the shed, reproduced in Fig. 22 C. The only difference is that there is not a two-sided roof on the top of it. The roof is nothing else than a continuation of the gable roofing.



After A. Grubauer.

Fig. 39. Door from Koelawi, with wood carving.

Houses of this type are not only found in Koelawi but also in several other mountain districts, now and then with small modifications in details. So we see them at the village of Tikala in the district of Tamoengkolowi, just west of Koelawi as well as at the old villages of the Lindoe Island. At Toro and Winatoe there are several houses of this type. They are also common in all Pipikoro, at least from Benahoe

to the villages of Tobakoe, both those situated north of the Koro as well as those south of the river.

In some districts this type of house has however certain peculiarities. In Koelawi it never contains more than one room, like the house of type A. Some of the houses on the island of Lake Lindoe as well as most of the houses in all



W. Kaudern Photo.

Fig. 40. Village in the district of Toro. The house to the left is a dwelling, that to the right a paddy barn.

the villages of Pipikoro which I have visited, contain two or even three rooms (Fig. 41). How it is at Toro, Gimpoe, and Winatoe I cannot tell.

The big room is generally divided into two by a wooden wall, put up at the gable opposite to the door, or along one side of the room. The inner room is usually rather narrow and sometimes divided into two cribs, used as bedrooms, communicating with the big room by a door made of a broad plank.

In the district of Tole the front part of the big room is

separated from the back part by a wall. Thus the house contains three or sometimes even four rooms. The fireplace is in the big room. As a rule there is no fireplace in the front room, and its walls, being more or less open, it has the

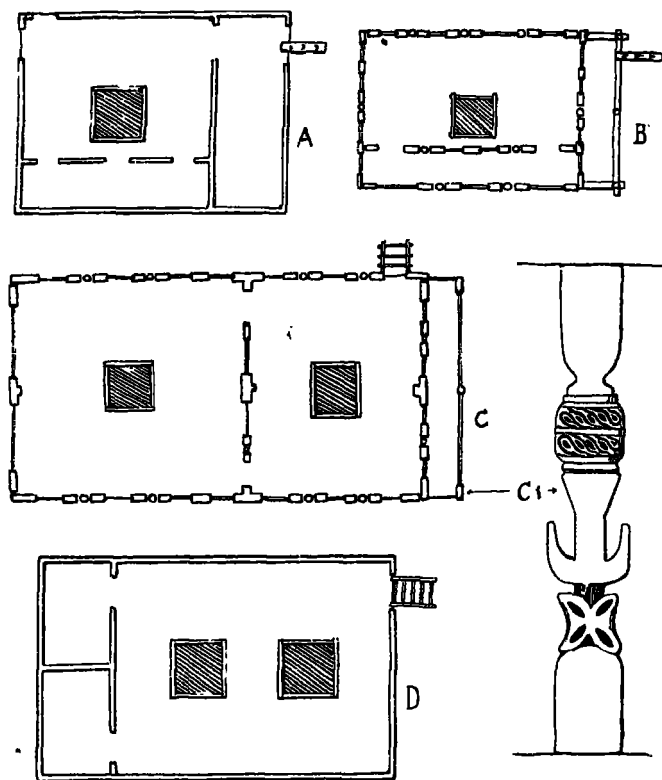


Fig. 47. Plans of houses in NW. Central Celebes. A—D 1:100; C¹ 1:10. A: from a house at Lawe in Tobakoe; B: from Poraelea in Tole; C: from Siwongi in Tobakoe; C¹: carved wall pole;

character of a veranda on a level with the rooms. In this way the wooden house in Tole has a certain resemblance to the simpler house of the district (Fig. 261). There is never a detached veranda in a Tole house, nor in the houses of the Lindoe Island.

The gable adornments vary a great deal. In Tole they do not as a rule use horns of *idjoek* but carvings (Fig. 42). At Winatoe I noticed a practice which I cannot remember having seen at any other place. It was the custom to put a pair of real buffalo horns at the top of each gable instead of horns made of *idjoek*.

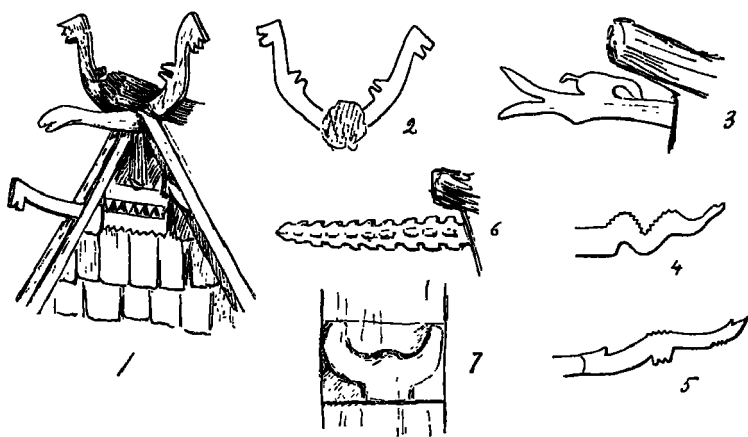
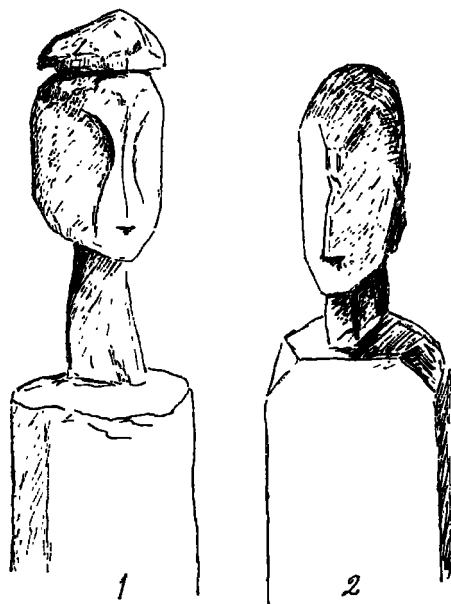


Fig. 42. 1—6: gable adornments of the houses of the Tole village of Pangana. 7: buffalo horns, carved in a wall plank of a house in the same village. 2: possibly means to represent horses' heads; 3: the head of a crocodile; 4, 5: the tail of a snake; 6: was called *panimba*, but what this word means I do not know.

The logs which form the bottom frame of the walls, are generally carved in some way or other at the ends. In Koelawi they are usually somewhat thicker and at one side angular. At Kantewoe and especially at Peana these stocks are big at the end and carved in the shape of an octagon, ornamented with carvings the chief subject of which is the buffalo head.

As to inside and outside adornment of the houses, it is to be noticed that upon the whole carvings are omitted in the districts north of the river Koro. South of this river we find carvings of a primitive nature rather common.

The human face, or man himself is very seldom used as subjects of adornment. The only case I know of, is the human head being used as an ornament on the top of two gateposts in the village of Moenoeboela south of Koelawi (Fig. 43). and a man's shape in lying position on a plank at Peana (Fig. 44 H).



about 1:8.

Fig. 43. The top of two gatl-posts in the village of Moenoeboela, situated between Koelawi and Gimpoe. Number 1 is a man, number 2 a woman.

The most common subjects of the carvings are the human genitals, either each kind alone, or both together with each other or with horns, animals' heads, ears, breasts, etc. (Figs 44, 45).

In rare cases the walls of the houses are adorned with carvings, representing animals, conventionalized trees or geometric figures (Fig. 46). This was especially the case

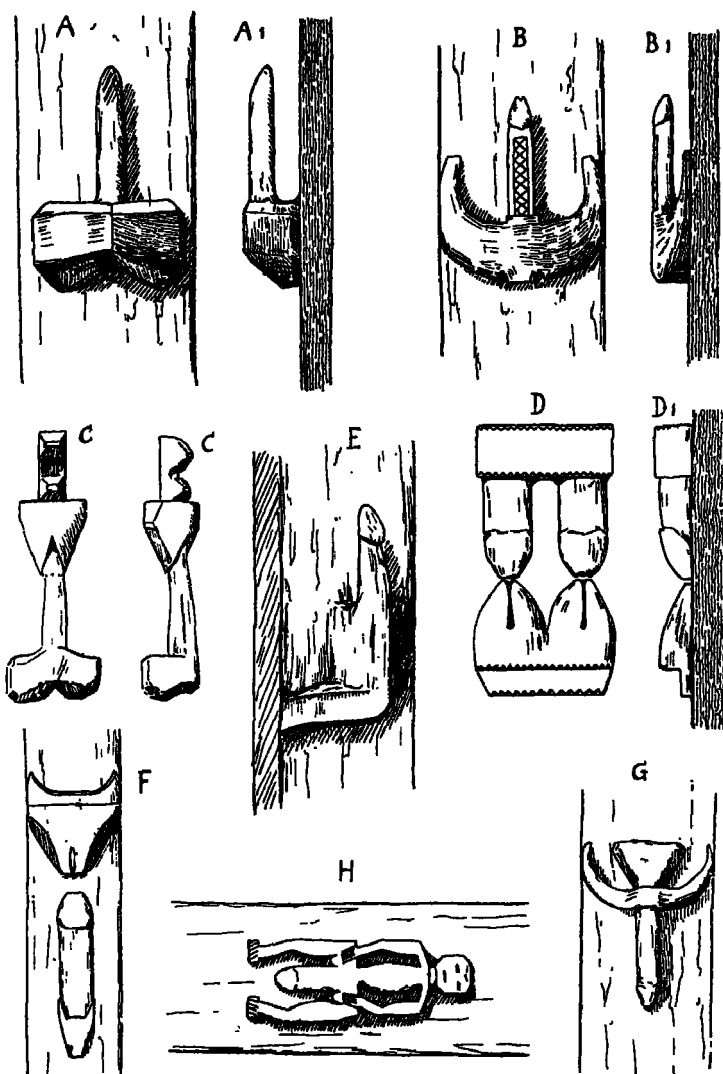


Fig. 44. Phallus figures on the walls of the dwellings in NW. Central Celebes.

A, A¹, B, B¹ from Siwongi in Tobakoe; C, C¹, E, G from Biro in Tobakoe; F from Kanoena in Tobakoe; D, D¹ from Kantewoe; H from Peana.

at Peana. In a house at Siwongi I found in an old plank a carving in the shape of ellipses in two lines and a row of

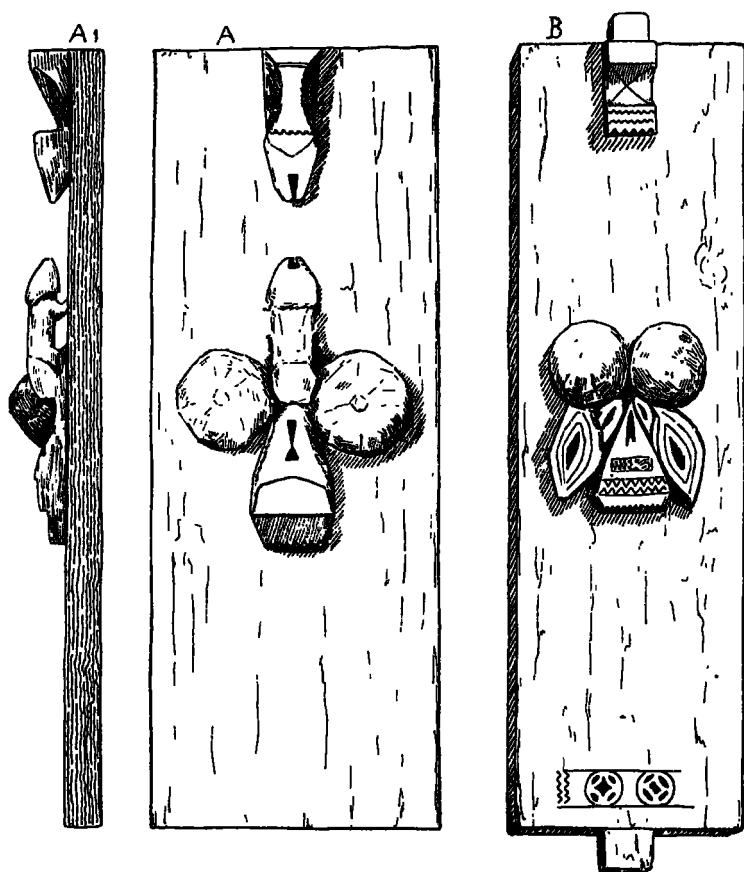


Fig. 45. Carved planks. A, A¹ from a house at Kantewoc; B from a house at Peana.

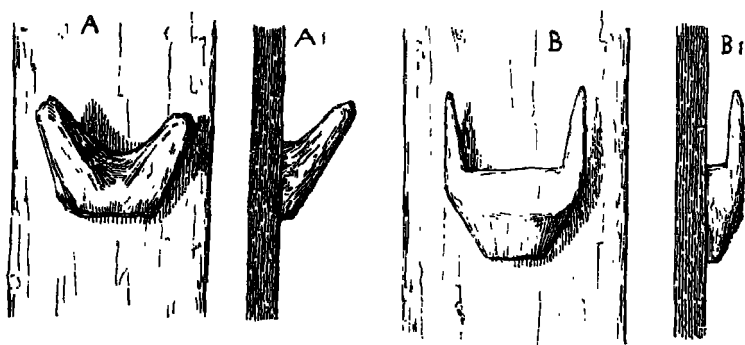
S-formed figures (Fig. 46 A). In a big house of the same village the gable posts were slightly ornamented (Fig. 41 C). On some house walls at Poraelea there were some very pri-





Fig. 46. A, F, G, H 1:10; B, C, D, E: 1:5; A<sup>1</sup> 1:5. Wall planks with carvings, from dwellings in NW. Central Celebes. A, A<sup>1</sup> from Siwongi in Tobakoe; B, C, D, E, G, H from Peana; F from Poraelea in Tole.

mitive carvings, representing horns of the *Anoa* and in one case those of a goat (Fig. 47).



1:10

Fig. 47. Wood carving in the shape of horns on wall planks.  
A, A<sup>1</sup> from a house at Poraelea in Tole; B, B<sup>1</sup> from a house at Biro in Tobakoe. A the horns of a goat, B those of an *Anoa*.



After P. and F. Sarasin.

Fig. 48. House at Toewa of so called Koelawi type C.

### Koelawi type C.

Then there is a third type of house in Koelawi a small number of which is found in the villages on the top of the Bolapapoe hill. In the Paloe Valley these houses are very common, but in the mountain districts I saw none outside Koelawi (Fig. 48).

In some respects it very much resembles the house just described, especially as to the construction of the walls. The foundation however is quite different. There are 10 posts, each resting on a flat stone, placed one at each corner, (a in Figs 49—53) two at each side and one at each gable. The roof rests on these 10 posts, the two in the middle at the gables being higher than the rest so as to be able to support the ridge bar (a in Figs 49, 52.).

A support to the floor as well as to the walls is acquired by cutting out holes about 1,5 m. above the ground in the posts and thrusting bars and planks through them. First the 4 cross-

bars are pushed in ( $b^1$  in Figs 49—53). On the top of them there is a layer of 10 long bars ( $b$  in Figs 49—51, 53), the two at the sides being pushed through the 4 side posts. On the top of this layer there is a layer of pinang laths ( $b^2$  in Figs 50—53), kept down in notches by a big plank

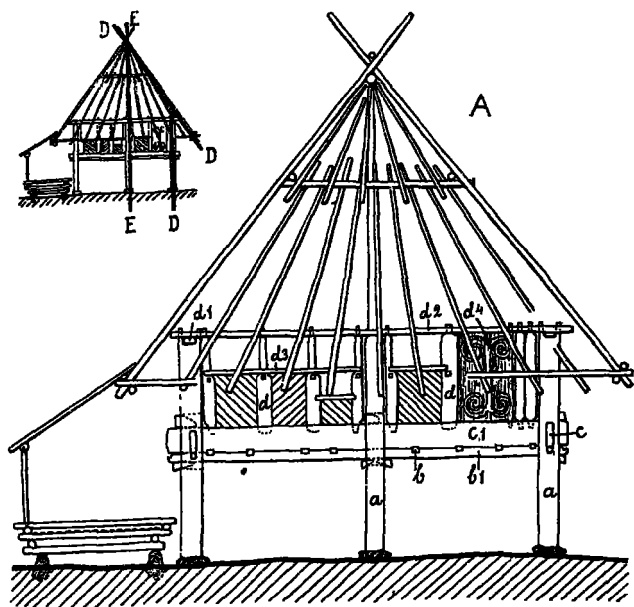


Fig. 49. Koelawi house of type C from the village of Panapa.  
a: foundation; b,  $b^1$ : beams and poles of the floor; c,  $c^1$ : floor frame;  
d— $d^3$ : walls. The miniature drawing shows the place of the sections D,E.

( $c$  in Figs 49—51) at each side of the house. This plank is like the bar below pushed through the 4 side-posts. Finally the gable plank ( $c^1$  in Figs 49, 51—53) is thrust through the 3 gable posts on the top of the 10 long bars. On the top of the pinang laths is a layer of bamboo laths ( $b^3$  in Figs 50, 52). In the middle of the floor there is a fireplace, made in the usual manner.

At the corners where the bars and the planks cross each other they are notched out so as to fit in firmly, when two

wedges are driven in, one underneath, another at the top (Fig. 53 A, B).

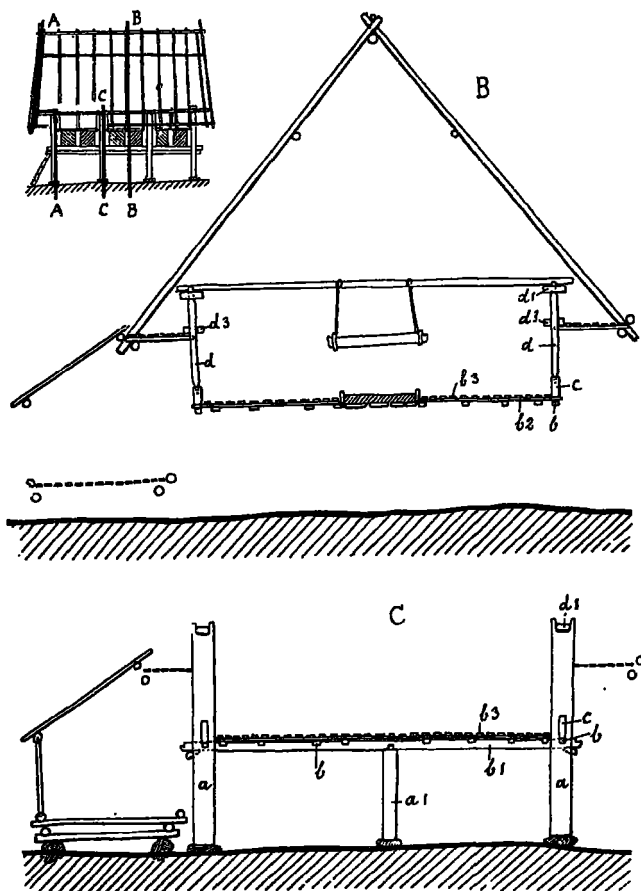


Fig. 50. Koelawi house of type C. 1:100.  
a, a<sup>1</sup>: foundation; b—b<sup>3</sup>: floor; c: floor frame; d—d<sup>3</sup>: walls.  
The miniature drawing shows the place of the sections A—C.

To make the bearing power of the floor greater two props are placed under, in the middle of the two inner cross-bars (a<sup>1</sup> in Figs 50 C, 52.).

The big planks form as in the other house a frame on which the wall planks (d in Figs 49—51, 53) are raised, made almost in the same manner as in a house of type B. Their number is however greater not only because this house as a rule is much bigger than the other one, but because there is one plank placed at each side of the posts (Figs 49, 51.).

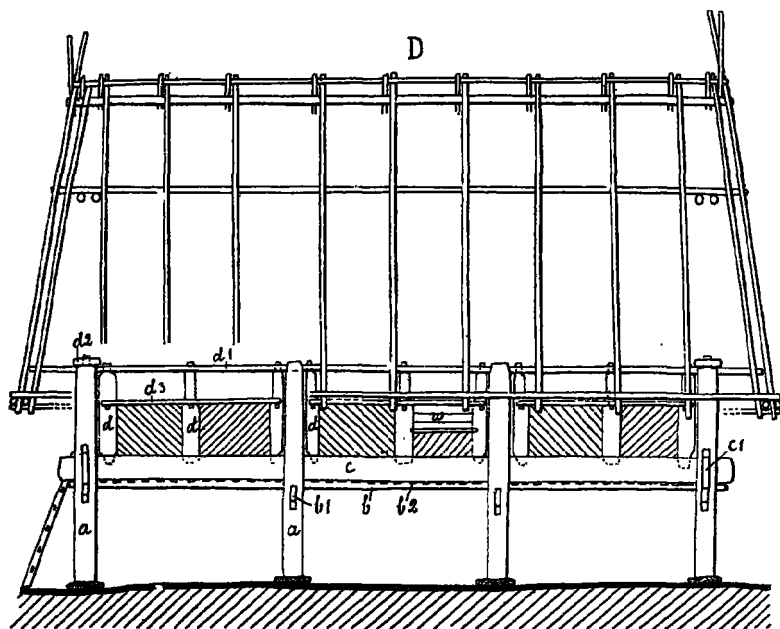


Fig. 51. Koelawi house of type C. a: foundation; b—b²: floor; c, floor frame; d—d³: walls; w: scuttle.

The tops of the planks as well as of the posts are kept together in the same way as in a house of type B. How the 4 planks (d¹, d² in Figs 49—53). work into each other, into the posts and into the wall planks can be seen in Fig. 53 E.

The walls do not come up as far as to the above mentioned frame. They end a bit below in a horizontal plank, long enough to fit in between two posts (d³ in Figs 49—51,

53.). In a house of type B the corresponding plank is of the same length as the whole wall.

The wall-panels between the upright planks are not generally made of pieces of wood but of gaba gaba, cut up into small boards. One side of the board still keeps the natural roundness of the stalk. These boards are pushed down

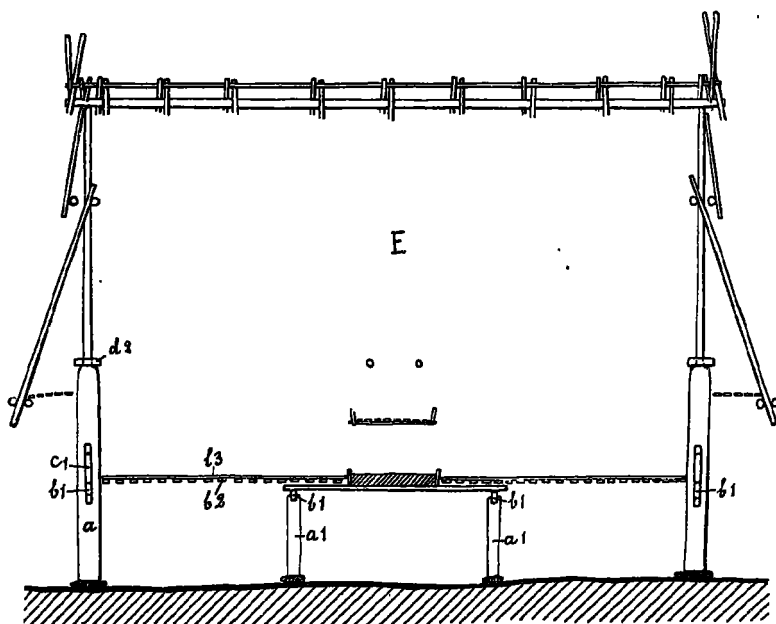


Fig. 52. Koelawi house of type C.  
a, a¹: foundation; b¹—b²: floor; c¹: floor frame; d²: wall frame.

between the planks in furrows, not horizontally but slantingly (Figs. 49, 51.).

There is a door (d⁴ in Figs 49, 53) at the gable as usual, and in addition there is another at one side. The house has no real windows but there is on one wall or perhaps on some of the walls an opening (Fig. 51 w), which can be shut by some laths of gaba gaba.

*The roof-truss, the roofing and the shelves in this house*

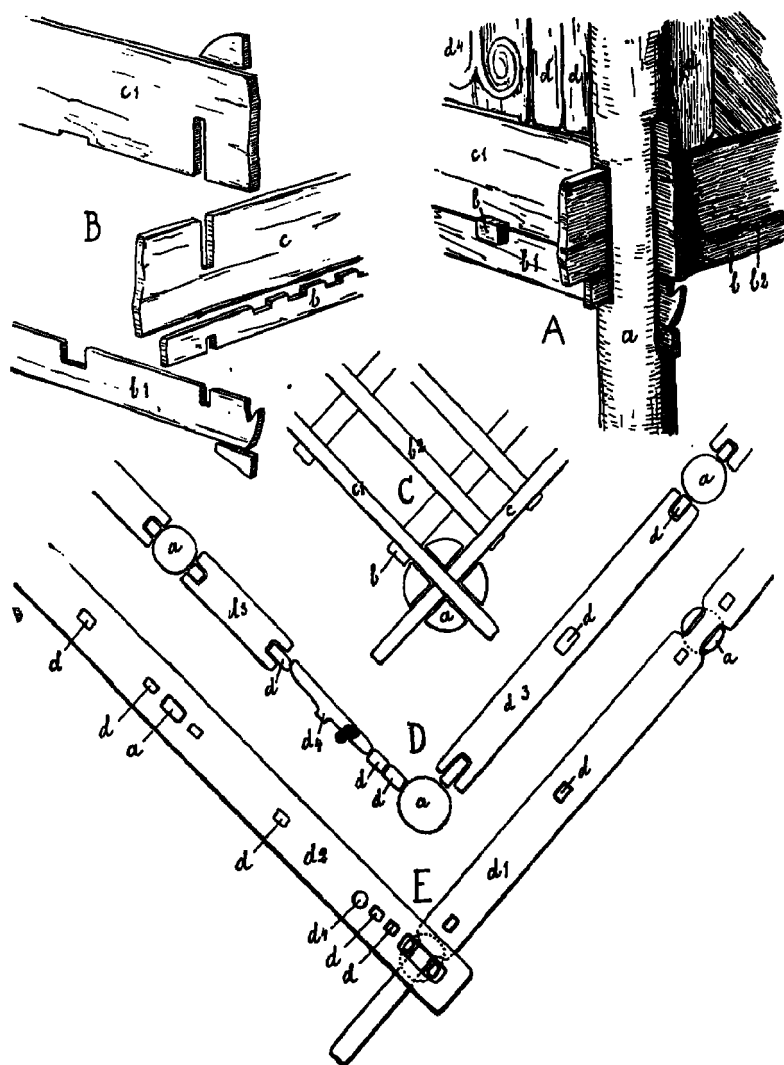


Fig. 53. Koelawi house of type C. One corner of the house  
 a: foundation; b—b²: floor; c, c¹: floor frame; d—d²: walls; d¹: door.



are quite the same as in a house of type B. The only ornaments of this house are the gable rafters being carved in the shape of an animal's head.

This house has generally a veranda the construction of which is about the same as that of type B, only it is never built at the gable but along the side of the house where there is a door. From the veranda a common ladder leads to the chief entrance of the house. At the gable door there is another ladder.



W. Kaudern Photo.

Fig. 54. House and paddy barns at the village of Tomado in Lindoe.

### The Lindoe type.

As I have already mentioned there are on the Lindoe Island several houses, built in almost the same way as the houses of type B, the foundation resting on stones, half in the ground. Only one house made an exception. The foundation was supported by posts, 2 m. high which were driven into the ground. The same was the case with the houses at Banggakoro and with a single house at the villages of Tipe and Towoeloe in Tobakoe.

The houses which the natives in Lindoe make nowadays are not at all like the old houses on the Island. In the inhabited villages of Langko, Tomado, and Antja the houses are built more or less after one and the same scheme. The house which I have measured stood in the village of Tomado (Figs 54, 55.).

The foundation of the Lindoe house is either made only of logs in 6 layers like the Koelawi house of type A,

or it is supported by posts, resting on a frame of logs like the Koelawi house of type B. In the former case the two logs at the bottom do not as a rule rest on the ground itself but on wooden blocks (Fig. 57 E), placed on a layer of *idjoek*.

If the foundation is of the same kind as in the Koelawi house of type B, the bottom logs generally are placed on



W. Kandern Photo.

Fig. 55. Houses and paddy barns at the village of Tomado in Lindoe.

stones, not standing by twos, but each log being supported only by one stone at each end (Figs 57, 58). The whole house will thus rest on only four stones.

The bottomlogs (a in Figs 57 D, 58) are in Lindoe contrary to the custom in Koelawi put at the gables. The logs (a<sup>1</sup> in Figs 56—58) placed across them are much longer than in Koelawi, so that they project far beyond the logs below. At the end of these logs are placed slanting props

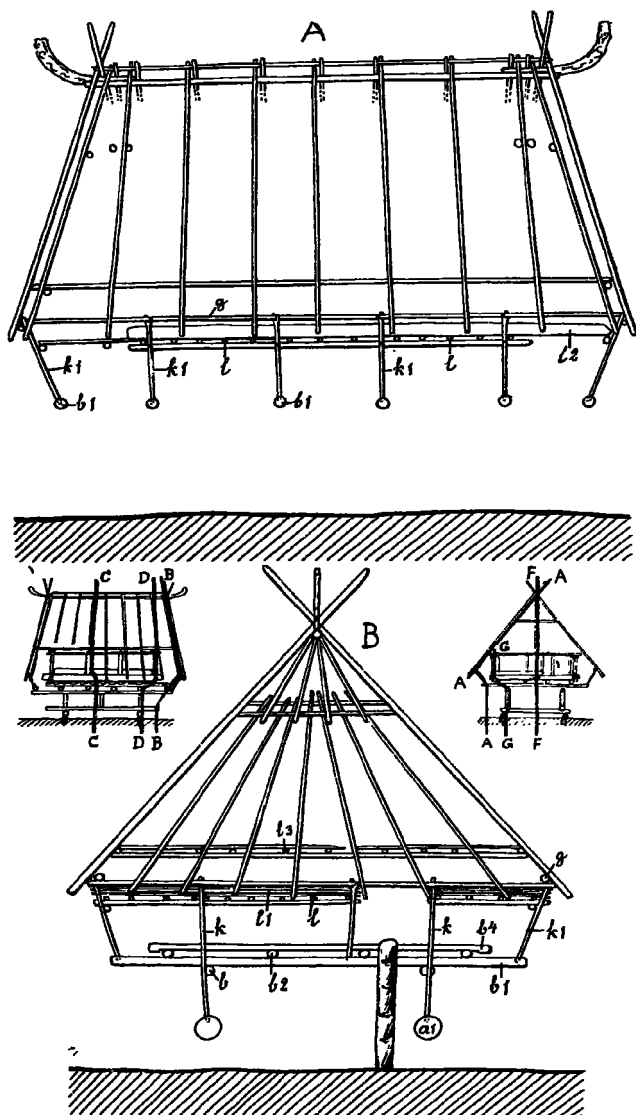
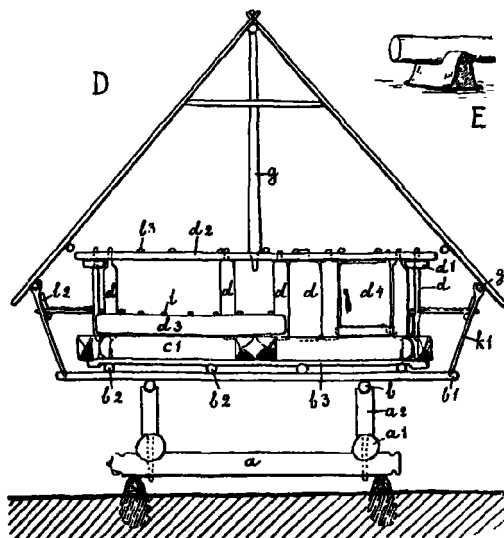
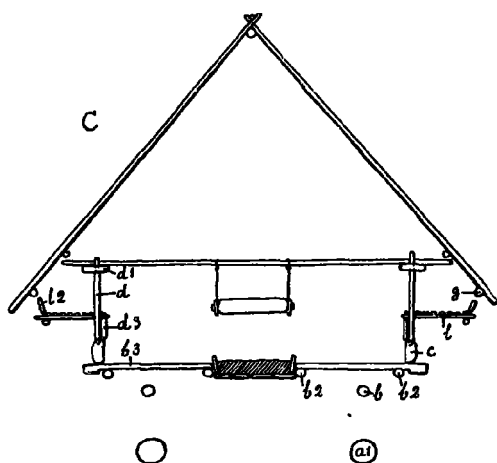


Fig. 56. House of Lindoe type.  
 a¹: foundation; b—b¹: floor; k, k¹: slanting props, supporting the roof's edge; l—l¹: shelves; g: bar at the bottom of the roof.  
 The miniature drawings show the place of the sections A-F.



1:100.

Fig. 57. House of Lindoe type.

a—a<sup>2</sup>: foundation; b—b<sup>3</sup>: floor; c, c<sup>1</sup>: floor frame; d—d<sup>3</sup>: walls; d<sup>4</sup>: door;  
g: bar at the bottom of the roof; g<sup>1</sup> pole, supporting the ridge bar,  
k<sup>1</sup>: slanting bars, supporting the roof's edge; 1—1<sup>3</sup>: shelf.

to support the edge of the roof at the gable (kin Figs 56 B, 58 G).

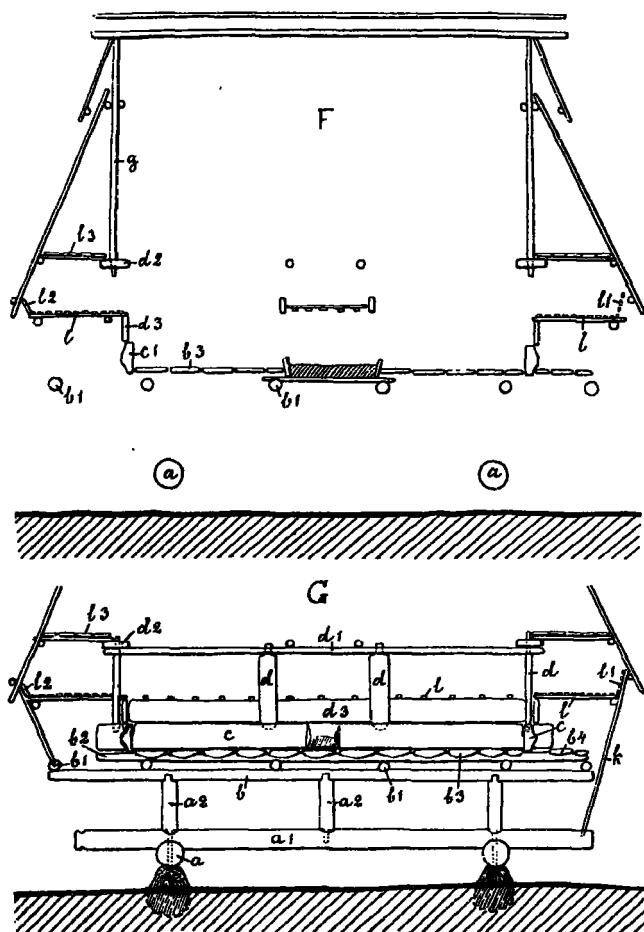


Fig. 58. House of Lindoe type. 1:100.  
a— $a^2$ : foundation; b— $b^4$ : floor; c,  $c^1$ : floor frame; d— $d^2$ : walls;  $g^1$ : poles, supporting the ridge bar; k: slanting bars, supporting the roof's edge; l— $l^2$ : shelf.

On the top of the two long logs are raised 3 short poles at each side (57 D, 58 G), but on the two cross-stocks at the bottom there is no pole. In the crotches of the 3 poles are placed 2 long bars, one at each side of the house (b in Figs 56 B, 57, 58 G). Across them are laid 6 bars (b<sup>1</sup> in Figs 56, 57 D, 58) which project far beyond the ones below.

The ends of these bars carry slanting props, (k<sup>1</sup> in Figs 56, 57 D) forming a support to the bar at the bottom of the roof (g in Figs 56, 57). Across the six bars are placed 4 long bars (b<sup>2</sup> in Figs 56, 57, 58 G), forming the support of the floor. This is here not made of bamboo or pinang laths, but of planks (b<sup>3</sup> in Figs 56—58). In the middle of the floor is left an open square for the fireplace of usual construction. In Lindoe it is also the custom to hang a box over the fireplace.

The walls are made almost as the walls in the Koelawi house of type B, only simpler. On the top of the floor planks, there is a frame of large planks (c, c<sup>1</sup> in Figs 57, 58) placed on edge. On the frame are raised a number of upright planks and at each corner a pole (d in Figs 57, 58), all of them being joined at the top in the usual way by taps, fitting in holes in a frame of planks (d<sup>1</sup>, d<sup>2</sup> in Figs 57, 58).

The walls of the Lindoe house generally are much lower than those of the Koelawi house of type B and C. They consist of a single plank (d<sup>3</sup> in Figs 57, 58) put round the floor on top of the frame on the floor planks.

Round the whole house there is a shelf, supported by sticks (l in Figs 56—58) one end of which rests on the wall planks, the other fastened to the sticks supporting a bar at the roof's edge. Across the sticks is tied a layer of small bamboo laths. On the outside, the shelves have a low wall, either of laths (l<sup>1</sup> in Figs 56, 58) or of boards (l<sup>2</sup> in Figs 56—58).

Beside these shelves the house often is provided with a second shelf (l<sup>3</sup>) at the gables, placed above the one just described. It seems always to be made of small boards. The construction of it can be seen in Figs 54—56.

The door ( $d^4$  in Fig. 55 D) is at the corner of one gable. In Lindoe it generally is made of a large plank, revolving on two taps, one at the top, the other at the bottom of the plank.

Not a single house of this type had a veranda in the same style as the houses in Koelawi, Tamoengkolowi, Winatoe, Toro, Gimpoe, and Pipikoro. But still there may be a kind of veranda at the gable where the door is, when the bottom shelf is missing, and the floor extends beyond the house ( $b^4$  in Figs 56 B, 58 G).

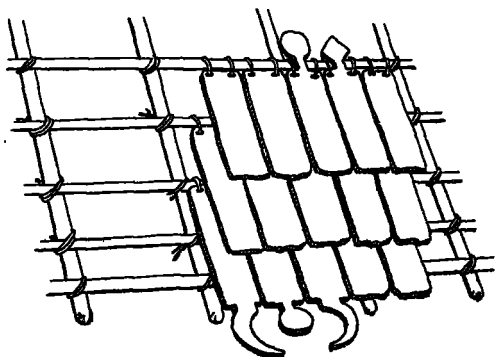


Fig. 59. Roofing of big, wooden shingles.

The roof-truss is like that of other houses, but the posts that support the ridge, do not come down to the floor frame but rest by means of a tap at the bottom in the planks of the upper wall frame ( $g^1$  in Figs 57, 58).

The roof is covered with common *atap* or with shingles of bamboo or sometimes even of wood (Fig. 59). In case of shingles, there are always laths of bamboo or strips of ratan fastened across the rafters to give a hold to the shingles.

I never saw any house divided into several rooms, nor were there any carvings on planks or logs or posts. The gables are not adorned with horns of *idjoek* as in Koelawi but the outermost rafters are at the top carved in the shape of a sickle. Between them stands a plank, usually more or



less richly ornamented with carvings, much like those of the Paloe Valley.

In the districts of Bada and Behoa I have noticed other peculiar house types, but I had not sufficient time to inspect them closely (Fig. 60). They seem however in several respects to resemble the Lindoe house, although the construction is more solid. The roof comes down right to the



After P. and F. Sarasin.

Fig. 60. House at the river of Toare in the western part of the district of Bada.

floor like a *gampiri* roof. To enter the house there is an opening made in the roofing of one gable.

As a rule there seem to be no walls like those in the room in the *gampiri*, at least not in the villages of Doda and Hangira in Behoa.

Although the houses in Bada and Behoa are much alike, they differ in certain respects. The roof for instance is in Behoa much higher and much steeper than in Bada. The

top of the gables is in Behoa ornamented in a way that reminds one of the Lindoe house. The odd plank and the small sticks extending beyond the roof's edge at the gables are more like these ornaments found in Tole. In Bada on the other hand the top of the gables is as a rule adorned with a pair of slender horns of *idjoek*, joined at the top. Beside these two horns there is an odd horn coming out like the odd plank of the Lindoe house. It is at the top



After A. Grubauer.

Fig. 61. The village of Doda in Behoa.

joined to the other horns. Occasionally I have found this odd horn with even two points, as on a house in a little village of 4 houses north-east of Bokoe and on a house or two in Bada itself.

To judge from literature the houses in the district of Napoe must be built almost in the same manner as in Behoa. The house type in the districts of Leboni and Rampi,

• south of Bada, will no doubt more or less resemble the houses of the latter district.

The roof is in Napoe, Behoa, Bada, Leboni, and Rampi generally covered with shingles of bamboo.

## The village temple.

Besides the dwelling-houses, the paddy barns and other houses before mentioned, the natives generally in every village built a big house, used for several purposes the most important of which was to serve as a dwelling for the spirits. In this house numerous religious feasts were celebrated. For this reason we must call it a temple.

About 20 years ago these temples were found in every village of any importance all over Central Celebes, but nowadays we only find them in the distant mountain districts of the N W. part. All the temples of the eastern part have been razed to the ground for some reason or other, without being subjected to any closer study.

What the Sarasins as well as Grubauer write about a single tempel is naturally very superficial, because they travelled hurriedly through the country, often under so great difficulties that they could not possibly pay attention to such features as the construction of houses or temples.

The missionary Alb. C. Kruijt has written about the temples of the Poso district, trying to describe these structures, but in many respects his description is incomplete. Moreover he does not seem to have studied the temples very closely, since he is of the opinion that they are all on the whole built in the same manner in the eastern as well as in the western part of Central Celebes. He says: »De tempels bij andere Toradja-stammen zooals To Napoe, To Besoa, To Bada, To Koelawi, komen in hoofdzaak overeen met die der Bare'e—Toradja's».

However it cannot be disputed that the temples as well as the dwelling-houses vary in the different districts. In

the districts of the N W. we find several decided types of temples although all structures of this kind resemble each other superficially.

In order to save the temples still left, from disappearing without leaving any trace behind, I have carefully measured them and represented them. By means of a strict examination of details I hoped to find which types of temples there are in Central Celebes, their geographical distribution as well as the development of the construction of these structures.

A temple is most like a big barn with a high, pointed roof and more or less low walls. In the temple there is a platform or a gallery round all four walls, 35—50 cm. above the level of the floor, as well as 1, 2 or 4 fireplaces. The entrances are 1 or 2. They are never shut by a door. As a rule the temples seem to be placed with special relation to the cardinal points. A few temples however seem to have been placed so as to get an appropriate position among the houses of the village.

Like the dwelling-houses and the paddy barns the temples rest on a foundation of a man's height, reminding us of the foundation of the different house types.

The floor itself is very often supported by a foundation of big logs, placed in several layers, while the platforms rest on a foundation of about the same construction as that of the common plank houses.

The roof, generally covered by big, roughly hewn shingles of wood (Fig. 59), is supported by a number of posts, the one in the middle of the house, if present, always resting on the floor, thus never coming down to the ground. The rest of the posts are placed differently in the different types of temples. The floor is always made of rough planks.

The temples are in most districts called *lobo* by the natives. This word will be used about the village temples of Central Celebes in general, although there are other names such as *doehoenga*, *sooe eo* etc.

The temples have surely got the name of lobo because of the plank floor. Doctor Kruijt writes about the meaning of this word as follows: »Het Bada'sche, Tawaelia'sche en Lebani'sche *lobo*, dat 'plank, planken vloer' beduidt, geeft duidelijk genoeg de beteekenis van *lobo* aan. De dorpstempel moest noodzakelijk een planken vloer hebben, daar het gebouw bij groote dagen lang propvol met menschen was en er soms door een groot aantal lieden tegelijk in gedanst werd. In het Tawaelia'sch heet de lobo *sowa*, 'ruimte, ruime plaats', in't Nap., Bad. en Bes. *doehoenga*, Leb. *doehoena*, maar ovrigens in de meeste Toradja'sche talen, ook in het Mori'sch, lobo. De benaming *patasi* voor de vloerplanken van de lobo is een meervoudsvorm van *pata*, Bes. *pata*, Rongkong'sch *patan*, 'plank, planken'. In Todjo noemt men het huis van het landschapshoofd en verder elk huis dat een planken vloer heeft, *kataba*, het Boeg. *katabang* 'dek van een Europeesch vartuig.' Vor de Toradja is een planken vloer nog iets zeer bizonders.»

Doctor Kruijt's explanation of the Tawaelisch word *sowa* seems however less convincing to me.

In the following account I have not used the native words for the different posts, logs, bars etc., because I found it almost impossible to get authentic information on this subject. Kruijt has used some native words in the bare'e language for different posts and planks which are applicable to the construction of some of the temples which I have examined.

In an earlier work I have classified the temples, which are found in the N.W. part of Celebes in the following types:

1. *The Koelawi type*, found at the villages of *Mataoe* and *Soengkoe* in Koelawi, at the village of *Tikala* in Tamoengkolowi in the mountains just west of Koelawi, on the *Lindoe Island*, at *Toewa*, and at *Winatoe*. Of the three temples in *Gimpoe* the one in the middle as well as the northern one are of this type. Quite near the Koelawi type stands the lobo of *Toro*.

2. *The Pipikoro type* of which there are three classes:
  - A *The Kantewoe type*, found at the villages of *Kantewoe*, *Peana*, *Benahoe* and in Koelawi at *Bolapapoe*.
  - B *The Tole type* which is found at the villages of *Pangana* and *Poraelea*.
  - C *The Siwongi type* which is most strongly pronounced at *Siwongi*. To this type may also belong the temples of *Biro* and *Lawe*.
3. *The Mopahi type* which I have only seen in the small village of *Mopahi*.
4. *The Lindoe type* which I found in the 3 comparatively young villages of *Tomado*, *Antja*, and *Langko* in Lindoe.
5. *The Towoeloe type* in the villages of *Towoeloe* and *Tipe*.
6. *The Bada-Behoa type* which I have seen at *Boelili* and *Gintoe* in Bada and at *Doda* and *Sangira* in Behoa.

Beside the temples of the above mentioned villages, I have examined the temples of *Makoedjawa* and *Bokoe* as well as a temple in the south part of *Gimpoe* which in several respects are different from the other temples. The temple of *Bokoe* I consider as a special type:

7. *The Bokoe type*, represented only by the temple at *Bokoe*.

As to the southern *Gimpoe lobo* and the *Makoedjawa lobo* they cannot be classified with any of the types above mentioned, and still they do not form a special type in themselves.

This is very likely due to the fact, that they are of rather late date and therefore less carefully built than the old lobos.



W. Kaudern Photo.

Fig. 62. The temple of Boladangko in Koelawi.

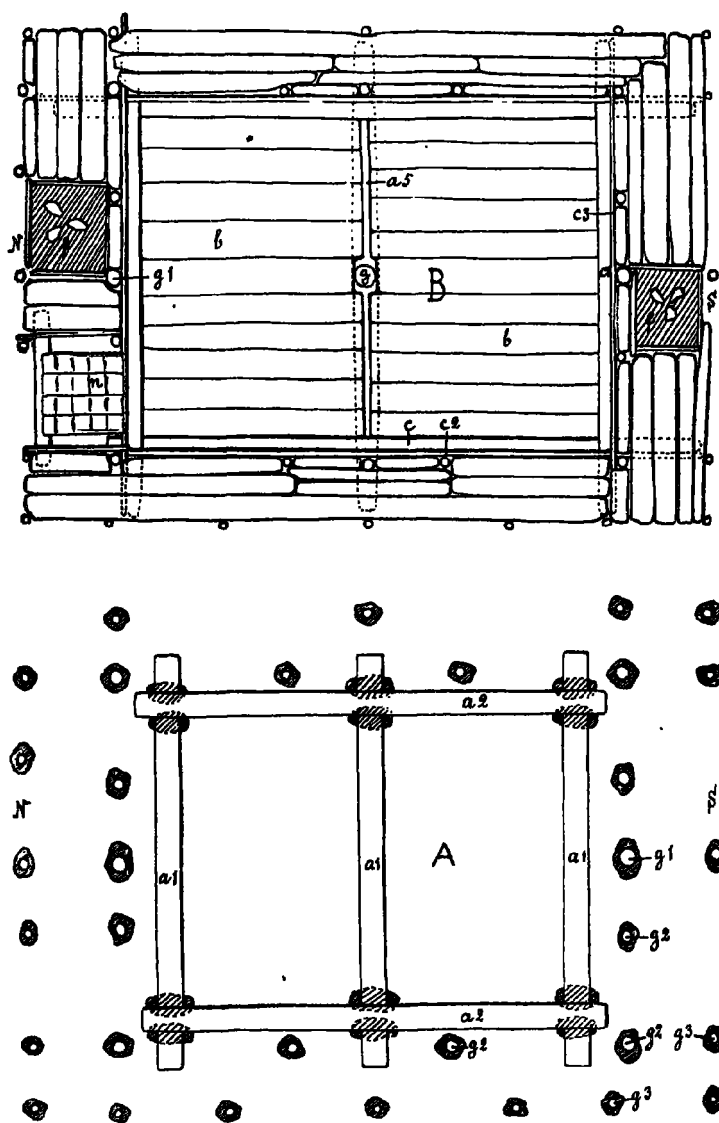
## I. The Koelawi type.

### Boladangko.

This lobo is situated at the southern outskirts of the village with the gables very nearly towards the north and the south. The angle of the compass needle was  $4^{\circ}$  when the north-south line was placed in the longitudinal direction of the structure. The face of the compass was divided into  $360^{\circ}$ . It measures 10,6 m. by 7 m.

The foundation consists of a number of roughly hewn logs and poles put on the top of each other in 5 layers. In the bottom layer there are 3 heavy logs ( $a^1$  in Figs 63 A, 65, 67, 68), resting on 4 more or less flat stones, 2 at each end, put on edge with the bigger part in the ground. On the top of the bottom logs there are 2 heavy logs placed in the longitudinal direction of the lobo ( $a^2$  in Figs 63 A, 65, 67, 68). The third layer consists of 3 logs put





1:100.

Fig. 63. The temple of Boladangko.  
 a<sup>1</sup>, a<sup>2</sup>, a<sup>3</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; f: fireplace;  
 g—g<sup>3</sup>: roof-truss; n: staircase.



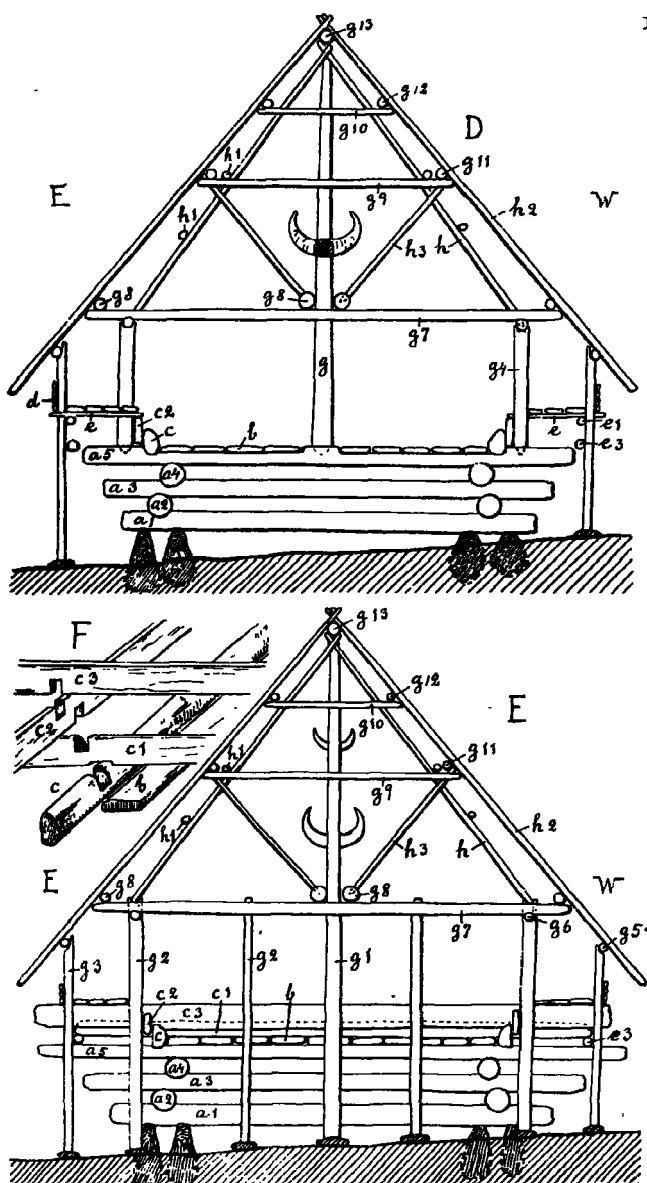


Fig. 65. The temple of Boladangko.

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a<sup>1</sup>—a<sup>5</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d: wall; e—e<sup>3</sup>: bars, supporting the platforms; g—g<sup>13</sup>: roof-truss, h, h<sup>2</sup>: rafters; h<sup>1</sup>: bar, tied to the inner rafters; h<sup>3</sup> slanting props, supporting the rafters.

æ groove, meant to hold the inner end of the floor planks (b in Figs 63 B, 65, 67).

*The floor.* Across the top layer of the foundation the floor planks are placed in the longitudinal direction of the house. They do not run from one gable to the other but

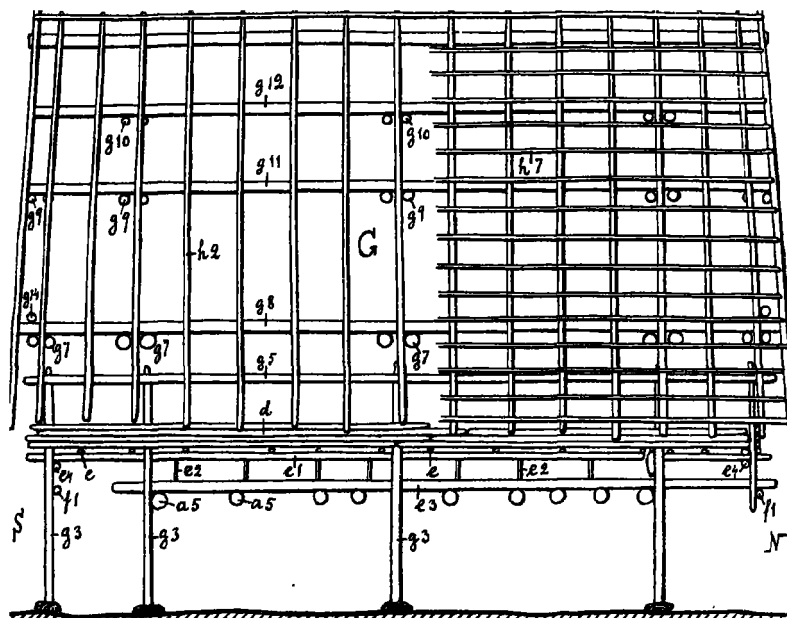


Fig. 66. The temple of Boladangko.

a<sup>5</sup>: foundation; d: wall; e—e<sup>4</sup>: bars, supporting the platforms; f<sup>1</sup>: bar, supporting the fireplace; g<sup>3</sup>—g<sup>24</sup>: roof-truss; h<sup>2</sup>, h<sup>7</sup>: roof.

are divided in half, the end toward centre resting in the groove of the middle log of the layer below. They are not fastened to the poles below by means of ratan or nails but are quite loose.

*The platforms.* Round the floor about 50 cm. above its level run shelflike platforms. They all are of same width on all sides and of same height. On the top of the floor there

is a *floor frame* of 4 roughly hewn logs (c, c' in Figs 63 B, 65, 67, 68) the ends of which fit in each other by means of notches. Outside this frame close to it, there stand on edge 4 big planks (c<sup>2</sup>, c<sup>3</sup> in Figs 63 B, 65, 67, 68). They are not only joined to each other but also to the frame by means

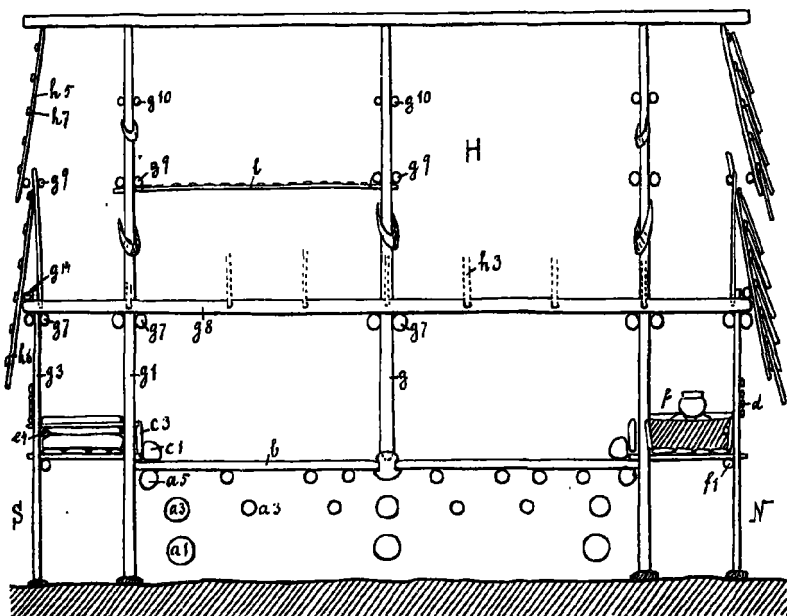


Fig. 67. The temple of Boladangko.

a<sup>1</sup>—a<sup>5</sup>: foundation; b: floor plank; c<sup>1</sup>, c<sup>2</sup>: floor frame; d: wall; e<sup>1</sup>: bar, supporting the gable platform; f: fireplace; f<sup>1</sup>: bar, supporting the fireplace; g—g<sup>14</sup>: roof-truss; h<sup>1</sup>—h<sup>8</sup>: roof.

of notches in the planks and in the frame as can be seen in Fig. 65 F. In small notches in the plank frame rest the inner end of the sticks (e in Figs 65 D, 68) which carry on their top the boards of the platforms. The outer ends of the sticks of the side platforms rest on a long bar (e<sup>1</sup> in Figs 65, 66, put on the top of a number of short, upright props (Fig. 66 e<sup>2</sup>), fitting in holes in a bar below (e<sup>3</sup> in Figs 65, 66)

which lies on the top of the uppermost layer of the foundation.

The sticks of the gable platforms are on the outside supported by a long bar ( $e^4$  in Figs 64, 66—68), carefully bound to

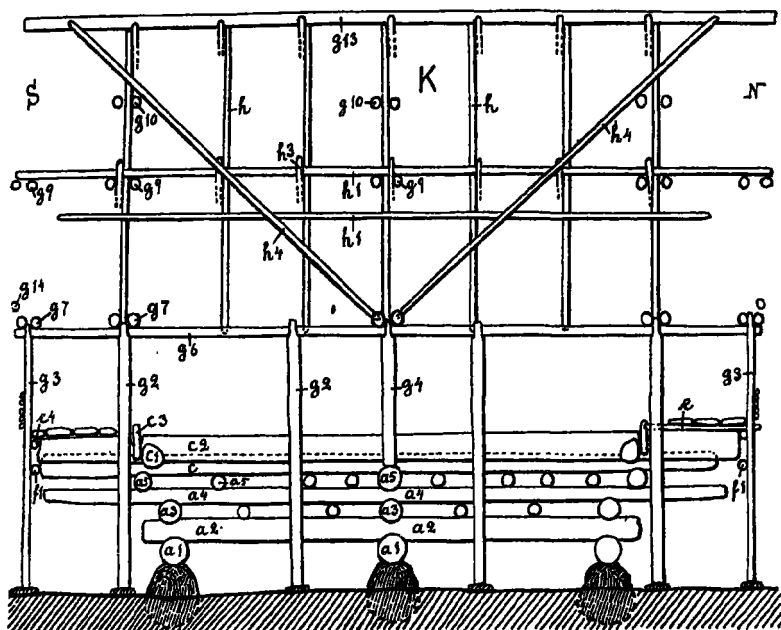


Fig. 68. The temple of Boladangko.

$a^1$ — $a^5$ : foundation;  $c$ — $c^3$ : floor frame;  $e$ ,  $e^4$ : bars, supporting the gable platforms;  $f$ : bar, supporting the fireplace;  $g^2$ — $g^{14}$ : roof-truss;  $h$ — $h^4$ : roof.

a number of high poles ( $g^3$  in Figs 63, 64, 66—68), so as to be strong enough to carry the platform.

In each gable platform there is a fireplace ( $f$  in Figs 63, 64, 67) and at the north side the entrance of the lobo.

The two fireplaces are not in the middle of the gable platforms but directly at one side of the middle line of the structure. At the north gable it lies east of this line, at the south gable west of it.

The fireplace is made of 4 planks, put on edge, forming a frame, and placed on a bed of thin stubs of wood, resting on a few sticks. These sticks are at one end supported by the floor planks, at the other by a bar ( $f^1$  in Figs 64, 67, 68), bound to the upright poles at the gables a little below the bars which form the support of the gable platforms.

The fireplace is filled with clay and earth to the level of the floor of the platform. There are some stones to place the pots on.

*The walls.* There are no real walls, only thin bars ( $d$  in Figs 64—67), placed on top of each other and tied to the poles which rise round the lobo, forming a small railing at the outside of the platforms.

*The roof-truss.* The roof is supported by a number of posts and poles as well as by smaller or heavier joists, running crosswise as well as in the longitudinal direction of the structure.

The most important posts are no doubt the three ( $g, g^1$  in Figs 63, 65, 67) which carry on their top the bar that forms the ridge of the roof. The middle one rests on a little swell on the beam in the middle of the floor ( $g$  in Fig. 65 D), the side ones are placed each on one stone on the ground ( $g^1$  in Figs 65, 67). They stand just outside the frame of the floor. Round that frame there are besides a number of poles ( $g^2$  in Figs 63, 65, 68), much shorter than the chief posts. They are placed one at each corner, 3 at the sides and 2 at the gables, one on each side of the post. All but two rest on flat stones on the ground. The middle pole at each side does not come down to the ground but is placed like the center post on the beam in the middle of the floor ( $g^4$  in Figs 65, 68).

Finally there are poles raised along the platforms the number of which will be about the same as that of the poles round the floor ( $g^3$  in Figs 63—68). All the poles but the one in the N.E. corner come down to the ground where

they rest on flat stones. The pole at the corner is comparatively slender and fastened by means of ratan strips to the horizontal bars of the platforms.

The poles at the sides, 7 at the west side and 4 at the east side, are shorter than the gable poles, 5 at the north gable and 3 at the south gable, depending on the slant of the roof.

On the top of these poles are at first placed 4 long bars ( $g^5$ ,  $g^6$  in Figs 64—66, 68), 2 along each side of the house, the outermost bar being tied to the short poles, the inner bar resting in the crotches of the poles which are raised just outside the frame of the floor and on two gable poles.

Across the inner bars then 5 pairs of heavy bars, serving as joists, are placed, so that each pair is fastened to the poles in the middle line of the lobo ( $g^7$  in Figs 64—68).

On the top of these joists, there are 4 bars put lengthwise two of which are tied to the three main post as well as to a gable pole on each side. The other two are placed at the end of the joists ( $g^8$  in Figs 64—67).

Beside the 5 pairs of joists, already mentioned, there are about 180 cm. above them 5 pairs of joists more ( $g^9$  in Figs 64—68). The three pairs in the middle are bound to the three main posts (Figs 65, 67), the two pairs at the gables to the top of a small pole, standing on one of the big bars in the middle of the lobo (Fig. 67).

About 100 cm above the last mentioned joists, there are 3 pairs more ( $g^{10}$  in Figs 65—68), fastened to the main posts. At the end of all the joists there are long bars placed in the longitudinal direction of the lobo ( $g^{11}$ ,  $g^{12}$  in Figs 64—66). These bars together with the joists form the support of the rafters, which are placed in two layers ( $h$  in Figs 65, 68). The inner layer, consisting of only 7 pairs of rafters, only covers the floor. They fit in small holes in the heavy longitudinal bars (Fig. 68  $g^6$ ), which rest on the poles just outside the floor frame. At the top they cross below the bar of the ridge ( $g^{13}$  in Figs 65, 68).



These inner rafters, which are not meant to carry any roofing, have no battens but 2 long bars along each side ( $h^1$  in Figs. 65, 68).

The proper rafters ( $h^2$  in Figs 65, 66) are bound to the ridge bar as well as to the bars at the ends of the 3 pairs of joists. At the bottom they are tied to the bar ( $g^5$ ) which is supported by the poles of the long platforms.

In order to increase the solidity of the roof-truss there are 7 pairs of props ( $h^3$  in Figs 65, 67, 68), resting in small notches in the two big bars in the middle of the lobo. The tops of the props are tied to the bar in the middle of the roof (Fig. 65  $g^{11}$ ). Then there are at each side of the roof between the inner and the outer rafters a pair of props, resting below in small notches in the two joists in the middle of the lobo, the top coming up to the ridge bar at some distance from the gable (Fig. 68  $h^4$ ).

The gables consist of two sections, one above the other, the border between them being the upper pair of joists at the gables (Fig. 64, 67). From the ridge bar radiate some comparatively short rafters ( $h^5$  in Figs 64, 67), at the bottom tied to the exterior joist. Between the two joists another number of radiating rafters are pushed in ( $h^6$  in Figs 64, 67). They are at one end fastened to the inner joist, at the other to a bar ( $g^{14}$  in Figs 64, 67), resting on the two heavy bars, running between the gables in the middle of the lobo.

*The roofing.* Across the outer rafters as well as across the radiating rafters of the gables are fastened a great number of battens ( $h^7$  in Figs 64, 66, 67), meant to support the shingles. The ridge is covered by a thick layer of *idjoek*.

*The entrance* is situated at the north gable to the right. The staircase ( $n$  in Figs 63, 64) is made of 4 heavy planks abreast in which 4 steps are cut out. The bottom of the staircase rests on a simple platform of some big logs, placed on the top of stones (Fig. 64). The top end of the staircase leans against the floor frame.

*Adornment.* The lobo of Boladangko has no sort of

carving, save a few shingles shaped like hooks and heads (Fig. 62).

The ridge is at the gables ornamented with a pair of horns of *idjoek* in the same way as we often see on the houses.

On the inside of the shingles I found a number of drawings, but they do not belong to the temple, but have been made at different occasions by some native fond of representing certain things by drawing them in charcoal.

As adornment might be classed some buffalo horns, fastened to the three main posts of the lobo.

*Movables.* On a shelf (Fig. 671) of bamboo laths lay some common lobo drums. One of them, shaped like a barrel, was bigger than the rest. Another had the form of a cylinder. These two were at both ends covered with the hide of the Anoa. Besides there was a small, cylindric drum with hide only at one end. None of the drums had any ornament at all.

At the north main post hung a small basket, containing an offering to the spirits.

## Mataoece.

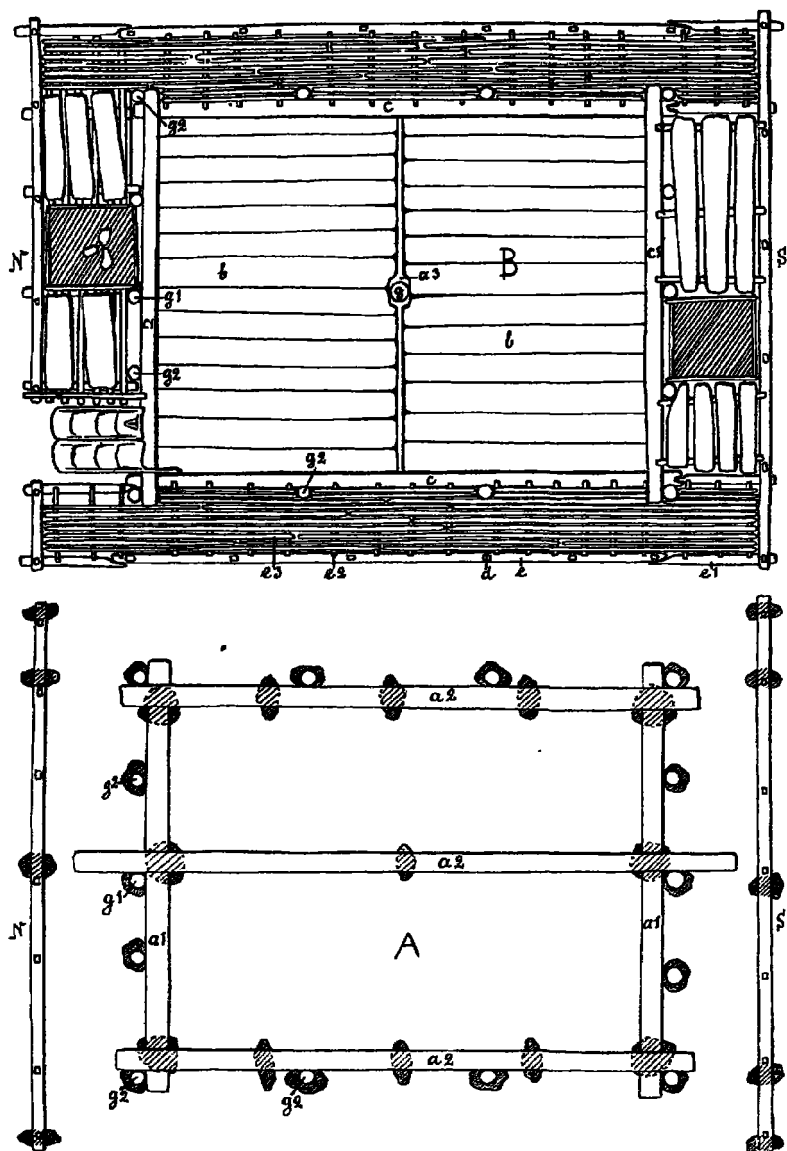
The lobo of the village of Mataoece is situated in the south-western corner of the village with the gables nearly toward the north and the south ( $12^{\circ}$ ).

It measures 10.75 m. by 8 m.

*The foundation* of this lobo consists partly of some logs, placed in layers under the floor, partly of a special foundation, meant to support the outside of the gable platforms.

At the bottom of the foundation there are 2 logs ( $a^1$  in Figs 69, 71, 73, 74) at the gables; projecting a little beyond the floor, each resting on 3 stones which are partly buried in the ground. On the top of the logs at the gables 3 heavier logs ( $a^2$  in Figs 69, 71, 73, 74) are placed in the longitudinal direction. The one in the middle is supported by *one* stone, the two side ones by *three* high stones, partly standing in the ground (Figs 69, 73, 74). In the third layer there are several poles ( $a^3$  in Figs 69, 71—74), the one in the middle being much heavier than the rest. It has along each side a groove to hold the planks of the floor. This log as well as two poles at each side of it are longer than the rest. They extend so far as to the outside of the long platforms ( $a^3$  in Figs 71, 72). The other poles of this layer are of about the same length as the logs of the bottom layer.

*The floor.* Across these poles are placed the floor planks (b in Figs 69, 71, 74) and the frame of the floor. The floor planks are just as in the previous lobo in two halves. Along the sides of the floor, there are 2 rather heavy poles (c in Figs 69, 71, 73, 74), resting like the planks on the poles of the layer below. The short side of the floor is also bordered by a heavy pole ( $c^1$  in Figs 69, 71, 73, 74), placed on the top

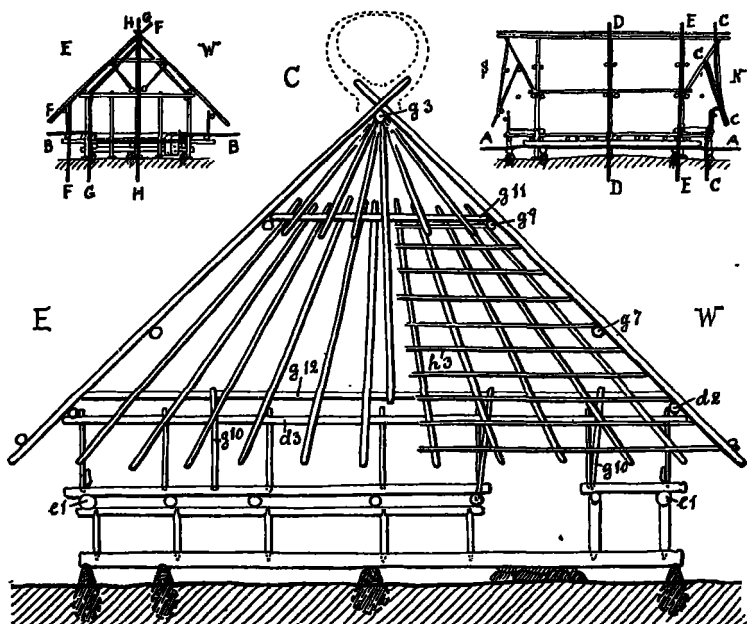


1:100.

Fig. 69. The temple of Mataoe.  
 a<sup>1</sup>—a<sup>2</sup>: foundation; b: floor planks; c, c<sup>1</sup>: floor frame; d: upright wall  
 planks; e—e<sup>2</sup>: platforms; g—g<sup>2</sup>: roof-truss.

of the planks, its ends fitting in notches in the side poles of the frame. There are no planks put on edge outside this frame as in the lobo of Boladangko.

The platforms rise above the floor at about the same



1:100.

Fig. 70. The temple of Mataoe.

$d^2$ ,  $d^3$ : upper wall frame;  $e^1$ : bar, supporting the platforms;  $g^2$ — $g^{11}$ : roof-truss;  $h^2$ : battens. The miniature drawings show the place of the sections A-H.

level. The long platforms are at the outer side supported by a pole ( $e$  in Figs 69, 71, 72), resting on the long poles of the top layer of the foundation. This pole however does not come as far as to the corner but is lengthened by a short pole ( $e^1$  in Figs 69, 70, 72), bound to it by means of ratan strips. Between this pole and the frame of the floor are placed a great number of sticks ( $e^2$  in Figs 69, 71), which carry the pinang laths of the floor ( $e^3$  in Figs 69, 71).

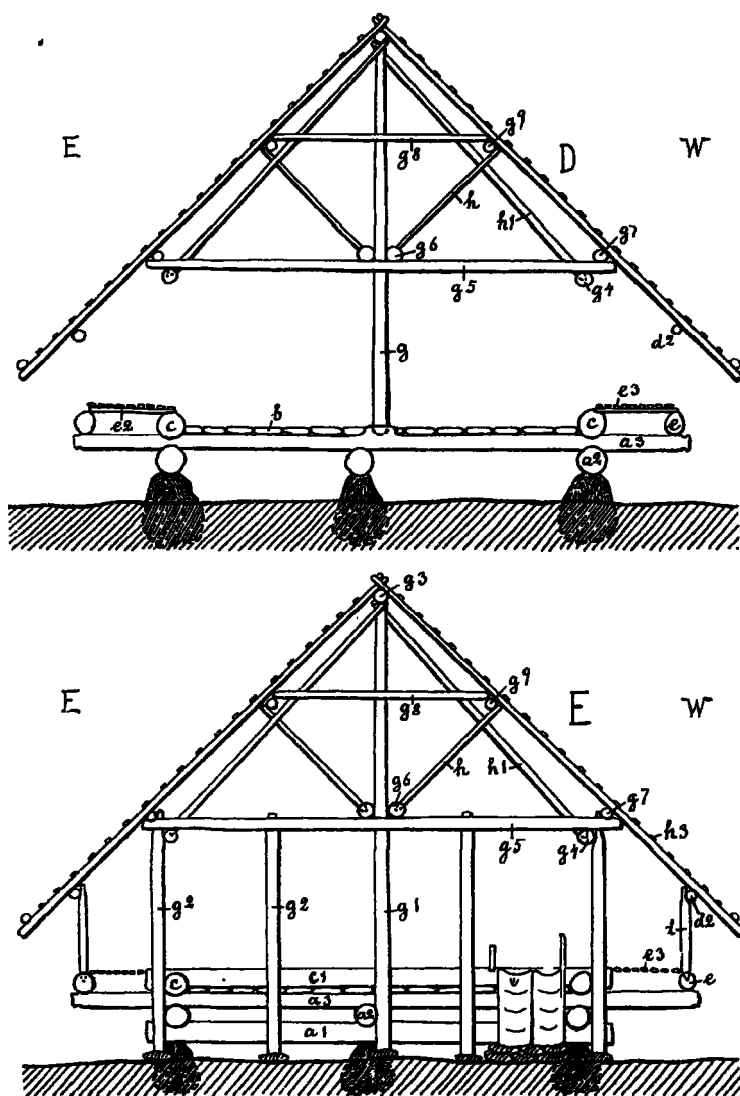


Fig. 71. The temple of Mataoe.

a<sup>1</sup>—a<sup>3</sup>: foundation; b: floor planks; c, c<sup>1</sup>: floor frame; d, d<sup>2</sup>: walls; e—e<sup>3</sup>: platforms; g—g<sup>9</sup>: roof-truss; h: slanting props, belonging to the roof-truss; h<sup>1</sup>: inner rafters; h<sup>2</sup>: battens.

The gable platforms were in a state of decay, especially the southern one which had fallen almost into pieces. The representations therefore are reconstructions which is particularly the case with the floors and the southern fireplace. But I could not quite make out how these parts had been constructed. The floor however was not made of pinang

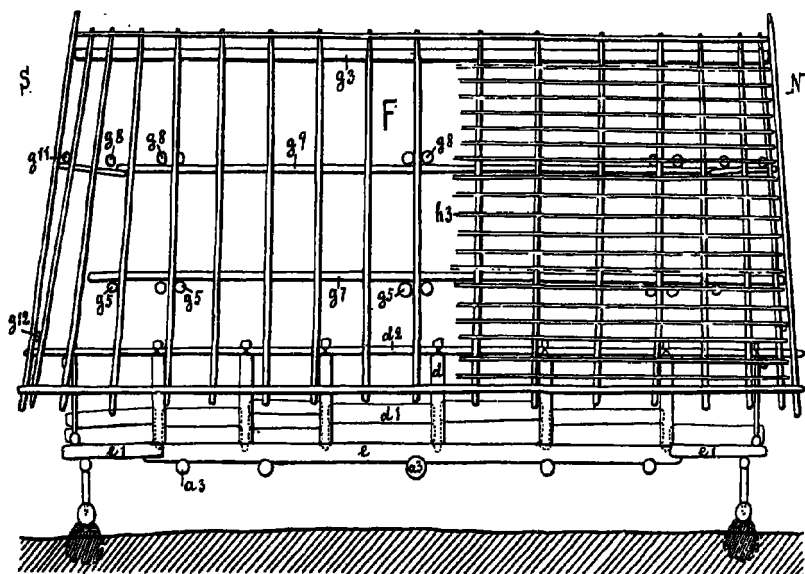


Fig. 72. The temple of Mataoe.

a<sup>3</sup>: foundation; d—d<sup>6</sup>: walls; e, e<sup>1</sup>: platforms; g<sup>3</sup>—g<sup>12</sup>: roof-truss; h<sup>3</sup>: battens.

laths like the floor of the long platforms but of planks. At the southern gable there were stubs of planks placed on top of a few cross bars the ends of which rested on the floor frame and on the uppermost bar of the foundation of the platform. The floor of the northern platform was not made quite in the same manner as the southern one. Only some short planks, representing the floor, were put on top of half a dozen sticks, lying along the gables on 4 short; rather heavy sticks, resting on the outermost pole of the layer

below the floor and on the long bar next to the top of the foundation of the platform (Fig. 69, 73, 74).

There are 2 *fireplaces*, one at each gable, placed in the same way as in the lobo of Boladangko, that is to say at the side of the middle line of the structure (Fig. 69, 74). The southern one, although almost fallen into pieces, seemed to

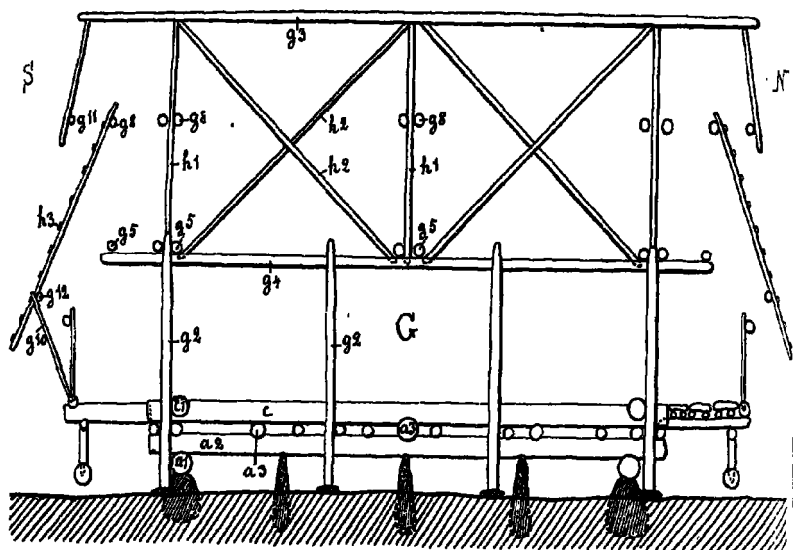


Fig. 73. The temple of Mataoee.

a<sup>1</sup>—a<sup>3</sup>: foundation; c, c<sup>1</sup>: floor frame; g<sup>1</sup>—g<sup>12</sup>: roof-truss; h<sup>1</sup>—h<sup>2</sup>: inner rafters; h<sup>3</sup>: battens.

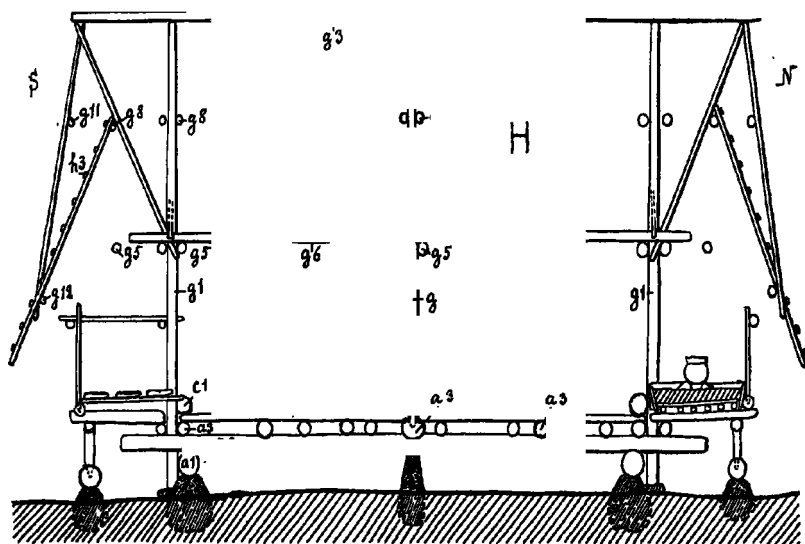
have been made in the same manner as the one in the north platform. It was made of 4 planks with some plank stubs at the bottom, in the shape of a shallow through or box. Inside, it was almost filled with earth, on the top of which lay some stones, meant to support the cooking pots.

*The walls.* Originally there had very likely been walls (d<sup>1</sup> in Fig. 72) all round the lobo, but at the time of my visit they were only left along the outside of the long platforms. They do not come up to the roof but only half



way up the upright wall planks (d in Figs 69, 71, 72) outside of the platform, supporting a bar at the bottom of the roof (d<sup>2</sup> in Figs 70, 71, 72)). The walls consist of comparatively thin boards, pushed down between the upright wall planks in furrows (d<sup>1</sup> in Fig. 72).

*The roof-truss.* The biggest of the poles supporting the



1:100.

Fig. 74. The temple of Mataoee.

a<sup>1</sup>—a<sup>3</sup>: foundation; b: floor planks; c<sup>1</sup>: floor frame; g—g<sup>2</sup>: roof-truss;  
h: slanting props, belonging to the roof-truss; h<sup>2</sup>: batters.

roof is the one in the center of the lobo (g in Figs 69, 71, 74.) It is placed on a swell on the heavy plank that parts the floor into two compartments. Round the floor frame rise a number of posts and poles (g<sup>2</sup> in Figs 69, 71, 73), all coming down to the ground where they rest on flat stones. At each corner there is a pole, and in the middle line of the lobo at each gable a heavy post (g<sup>1</sup> in Figs 69, 71, 74) coming up to the ridge. •

Besides there are at all four sides 2 poles of the same height as those at the corners ( $g^2$  in Figs 69, 71, 73).

The two posts at the short sides carry together with the center post on their top the ridge pole ( $g^3$  in Figs 70—74) of the roof.

The poles along the sides of the frame support a bar, not resting in crotches as in the Boladangko lobo but bound inside the poles a little below the top ( $g^4$  in Figs 71, 73). It does however not reach the gables. Across these bars are placed 3 pairs of joists as well as an odd joist at each end ( $g^5$  in Figs 71—74). On top of the 3 pairs of joists is placed a pair of long bars, one at each side of the main posts in the middle of the structure ( $g^6$  in Figs 71, 74). They are not so long as to reach the odd joist near the gable. Besides there is at the end of the joists and odd bar, forming a support to the rafters ( $g^7$  in Figs 70—72).

Right above these joists there is another row of joists of the same number as those below and arranged in the same manner ( $g^8$  in Figs 71—74), but there are no bars on the top of them. They are bound to the 3 main posts, the ends supported by two long bars, fastened to the rafters ( $g^9$  in Figs 70—72).

The slanting props which support the bars at the bottom of the roof at the gables do not come down to the ground but are placed on the bars, forming the outer border of the platforms ( $g^{10}$  in Figs 70, 73).

In order to add to the solidity of the truss, there are 3 pairs of props ( $h$  in Figs 71, 74) of which one end rests in a hole in the long heavy bar in the middle of the lobo, the other end is fastened to the top bar, running along the side of the roof.

Beside the main rafters there are inside 3 pairs of rafters ( $h^1$  in Figs 71, 73) as well as two long bars crossing each other, as can be seen in Fig. 73  $h^2$ . Across the

real rafters are placed the battens ( $h^3$  in Figs 70—74) to give a support to the big shingles.

The rafters of the gables are fastened to 2 long bars, the top one ( $g^{11}$  in Figs 70, 72—74) tied to the upper long bars of the roof, the one below ( $g^{12}$  in Figs 70, 72—74) bound to the outermost rafters of the roof.

The lobo has only one *entrance*, situated on the north gable near the western corner. *The staircase* consists of 2 heavy logs abreast in which some steps are hewn out. At the top of the left log there is a carving, representing a vulva in the common style (Fig. 69). The right log ends in a stick, serving as hand rail. The top of it has been given the shape of snake's head or something similar.

There were no other carvings or *ornaments*, nor were there any *movables*.



W. Kaudern Photo.

Fig. 75. The village of Soengkoe in Koelawi. The pointed roof in the background belongs to the temple.

## Soengkoe.

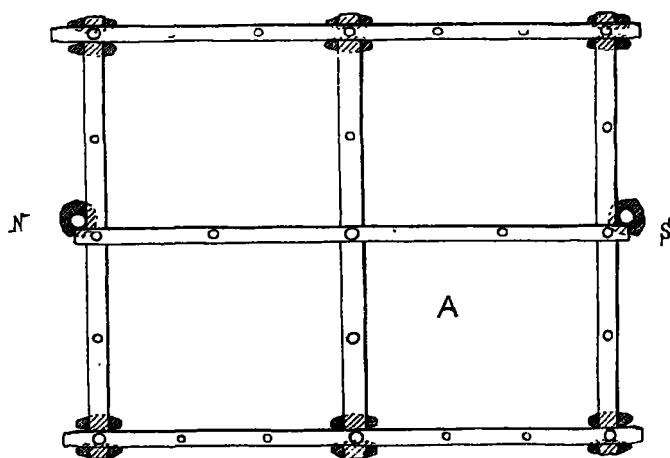
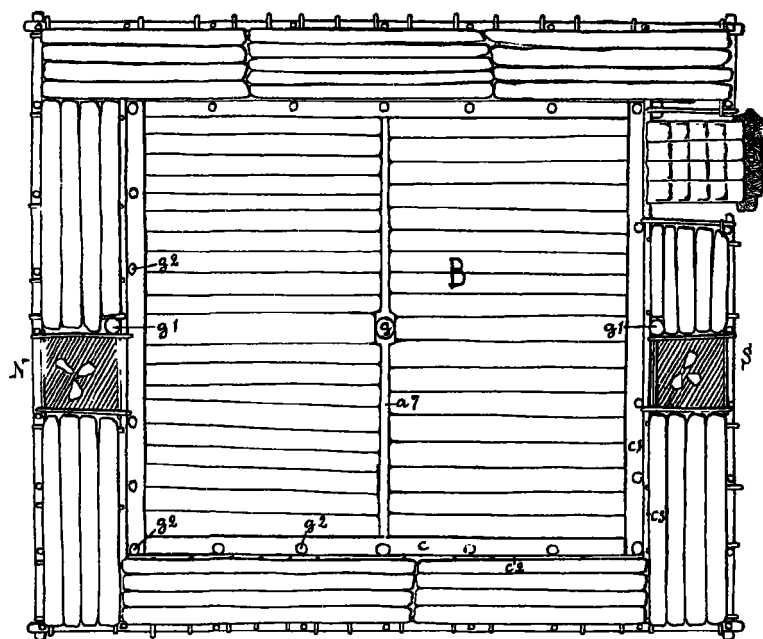
This lobo is situated in the NW. corner of the village. The gables lie very nearly toward the north and the south ( $356^{\circ}$ )

It measures 9,9 m. by 8,5 m.

In several respects this temple differs from the other two temples of Koelawi. Especially is this the case with the foundation, which in many cases reminds one of the foundation of the Koelawi house of type B. The slight difference can easily be seen in Figs 78, 80, 81.

On the top of the foundation there are bars in two layers. The bottom one consists of 5 long bars ( $a^4$  in Figs 77, 78, 80, 81) which project so far beyond the gables as to be able to carry a bar ( $a^5$  in Fig. 77,  $a^6$  in Figs 79—81) supporting the props of the gable platforms (d in Fig. 77, 80, 81).

Across these 5 bars there is in the middle placed a



1:100.

Fig. 76. The temple of Soengkoe.  
 a¹: beam in the middle of the floor; c¹: floor frame; g- g²: roof-truss.

heavy log with a groove along each side, meant to hold one end of the planks of the floor ( $a^7$  in Figs 76, 78, 80, 81). At each gable as well as at the end of the floor there are slender poles. These poles as well as a great number of bars, pla-

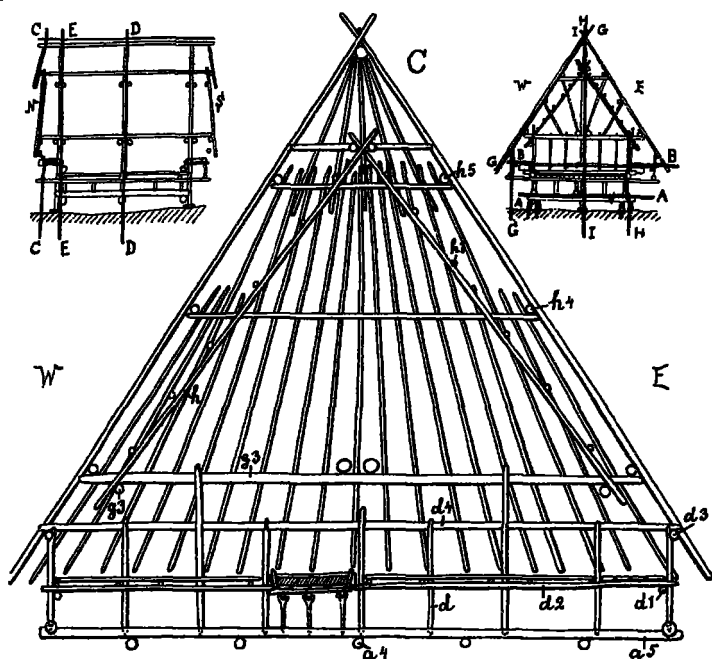


Fig. 77. The temple of Soengkoe.

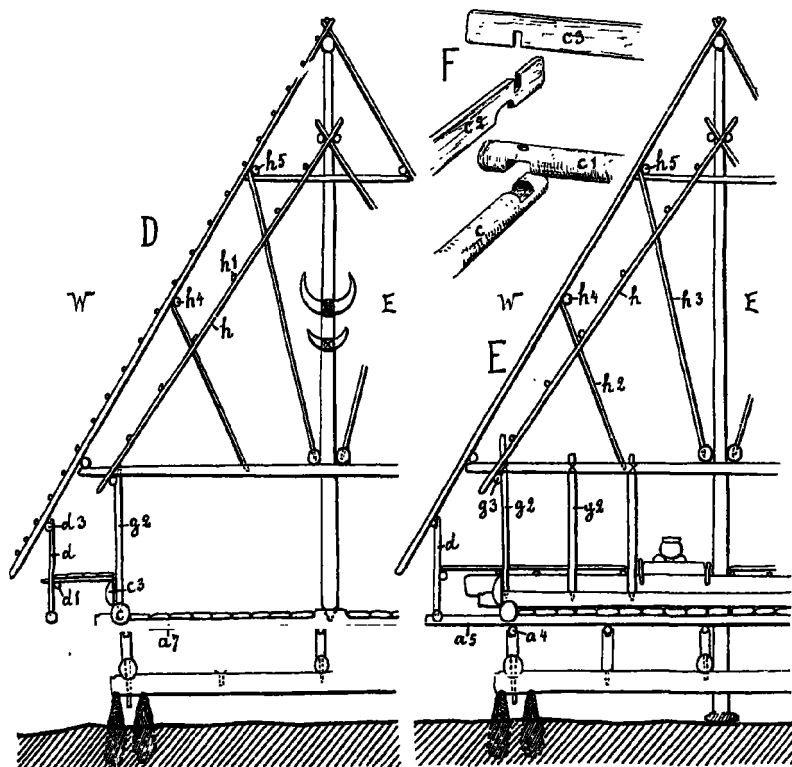
1:100.

$a^4$ ,  $a^5$ : foundation;  $d$ — $d^4$ : platforms and walls;  $g^3$ : roof-truss;  $h$ ,  $h^1$ : inner rafters;  $h^4$ ,  $h^5$ : outer rafters. ( $a^5 = a^6$  in Figs 79—81)

The miniature drawings show the place of the sections A—I

ced between them, project so far beyond the foundation as to be able to support the long platforms and the bottom of the roof (Figs. 78, 79), by means of props( $d$ ), joined by a bar on their tops ( $d^3$  in Figs 77—79) and another at the height of the platforms ( $d^1$  in Figs 77—79).

The floor is made in the same way as in the two lobos I have already described. It is bordered by a double frame, the inner one made of poles, (c, c<sup>1</sup> in Figs 76, 78, 80, 81) the outer one (c<sup>2</sup>, c<sup>3</sup> in Figs. 76, 78, 80, 81) of planks, placed



1:100.

Fig. 78. The temple of Soengkoe.

a<sup>4</sup>—a<sup>7</sup>: foundation; c—c<sup>3</sup>: floor frame; d—d<sup>3</sup>: platforms and walls; g<sup>2</sup>: pole, belonging to the roof-truss; h, h<sup>1</sup>: inner rafters; h<sup>2</sup>, h<sup>3</sup>: slanting props, belonging to the roof-truss; h<sup>4</sup>, h<sup>5</sup>: long bars, supporting the rafters.

on edge close to the poles. How they are joined can be seen in Fig. 78 F.

The platforms are of the same width all round the lobo with a floor of planks put on the top of a layer of sticks, supported at one side by the planks of the floor frame,

at the other by the lower bar ( $d^1$  in Figs 77—80), fastened to the above mentioned props. There are no walls outside the platforms.

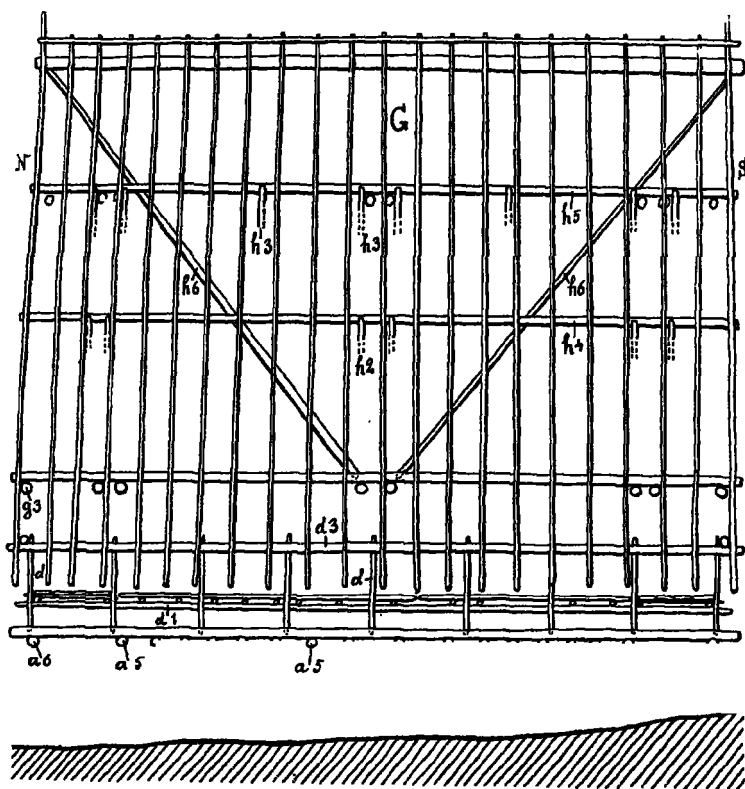


Fig. 79. The temple of Soengkoe.  
 $a^5$ ,  $a^6$ : foundation;  $d^1$ — $d^3$ : platforms and walls;  $g^3$ : roof-truss;  $h^1$ — $h^6$ : roof and slanting props.

There are 2 fireplaces, one at each gable, placed just west of the middle line of the lobo. They are made in the usual way, only the sticks which support the bottom of the fireplace at the outside are forked (Figs 77, 81).

*The roof-truss* The inner floor frame carries a number



of poles ( $g^2$  in Figs 76, 78, 80) on the top of which is fastened a frame of 4 heavy bars ( $g^3$  in Figs 77—81). This frame is the support of the inner roof-truss, consisting of no less than

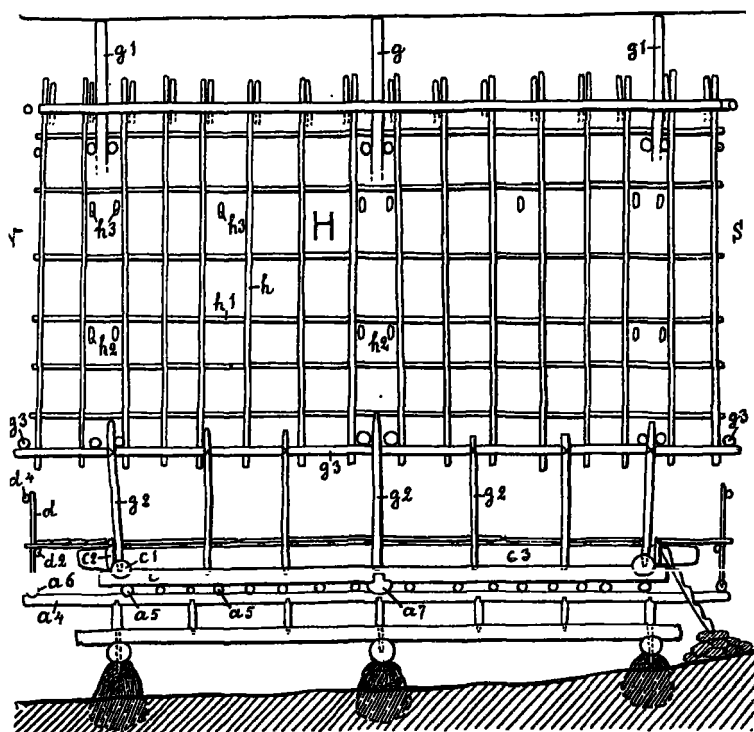


Fig. 80. The temple of Soengkoc.

$a^1$ — $a^7$ : foundation;  $c$ — $c^1$ : floor frame;  $d$ — $d^1$ : platforms and walls;  $g$ — $g^3$ : roof-truss;  $h$ — $h^1$ : roof.

16 pairs of rafters ( $h$  in Fig. 77, 78, 80) which are joined by a number of long bars, tied outside ( $h^1$  in Figs 77, 78, 80).

The construction of the roof is the usual one, but it is here higher and more pointed than in the two other lobes (Fig. 77). The gables are also comparatively steep (Fig. 81).

The ridge pole is supported by the 3 chief posts in the middle line of the lobo ( $g, g^1$  in Figs 76, 80, 81), the one in the middle resting on the heavy beam, lying in the

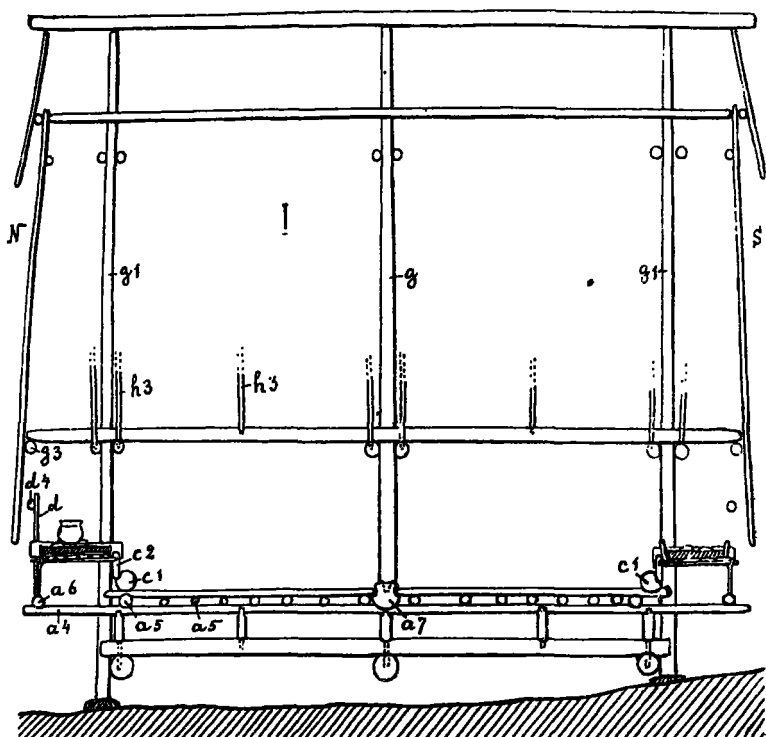


Fig. 81. The temple of Soengkoe.  
 $a^1$ — $a^7$ : foundation;  $c^1$ — $c^3$ : floor frame;  $d, d^4$ : walls;  $g$ — $g^1$ : roof-truss;  
 $h^2, h^3$ : slanting props, belonging to the roof-truss.

middle of the floor, the two at the sides on flat stones on the ground.

The roof of this lobo is strengthened by a number of slanting props, put in two rows, an outer ( $h^2$  in Figs 78—80) and an inner ( $h^3$  in Figs 78—81). The inner props are on each side 8 in number, the outer ones only 6. The top is as usual

tied to the bars which cross the outer rafters and keep them together ( $h^4$ ,  $h^5$  in Figs 77—79). How they are fastened at the bottom will be seen in Figs 78 and 81. Besides the rafters are joined by two long, slanting bars at each side ( $h^6$  in Fig. 79).

*The roofing* consists of big shingles. They are not fastened to wooden battens but to rather thick ratans.

*The entrance* is to the right on the south gable.

There were no special *adornments* in the form of carvings to be found in this lobo, save some shingles at the bottom of the roof, being carved at the lower end in the shape of some sort of horn (Fig. 104: 1,2).

I found no other *movables* than a basket for offerings to the spirits hanging down from the roof at one gable, and a couple of drums, very old and in bad condition. The drums were made of a piece of trunk, hollowed out, covered at both ends with the hide of the Anoa. The hide was made fast by means of a number of wooden pegs.



W. Kaudern Photo.

Fig. 82. The temple of Tikala in Tamoengkolowi.

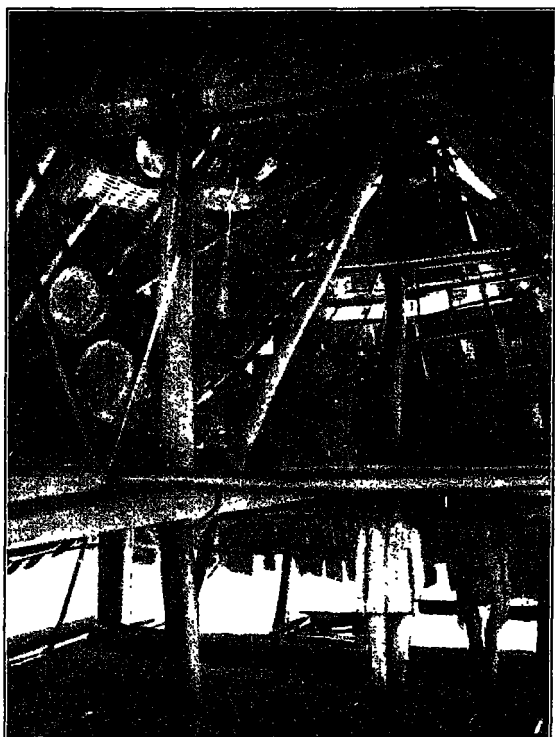
### Tikala (Tamoengkolowi).

The lobo is situated in the northern part of the village with the gables very nearly turned toward the north and the south ( $4^0$ ).

It measures 8 m. by 6,75 m.

*The foundation* very much reminds one of that of the Boladangko lobo and the Soengkoe lobo. There are 2 logs at the bottom, each resting on 3 stones, partly driven into the ground ( $a^1$  in Figs 84, 85, 87). On the top of them there are 4 heavy cross logs ( $a^2$  in Figs 84, 85, 87), which form the support of 2 long poles ( $a^3$  in Figs 84—87). They project far beyond the 2 logs at the bottom of the foundation and decide the length of the structure. Across these poles is placed a layer of other poles ( $a^4$  in Figs 84—87) so long as the lobo is broad. The one in the middle is heavier and has along each side a groove to hold the planks of the floor. The two at the ends are cut plane and

form together with a long plank at the west side and two short ones at the east side a frame with an opening in the middle of the east side ( $a^5$  in Figs 84—86).

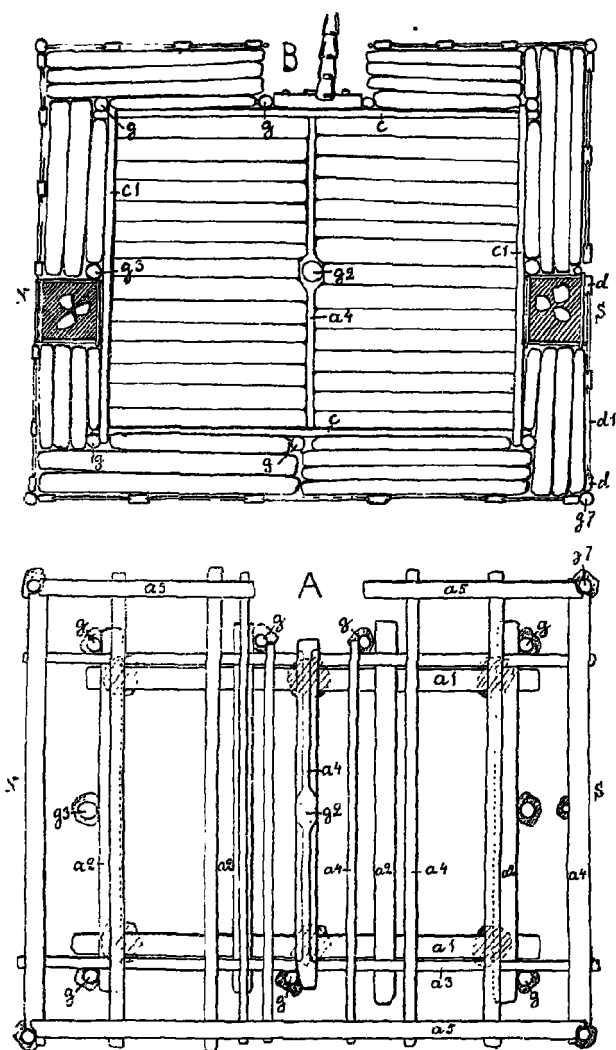


W. Kaudern Photo.

Fig. 83. The inside of the temple of Tikala in Tamoengkolowi.

*The floor frame* consists of 4 planks ( $c$ ,  $c^1$  in Figs. 84, 85, 87), put on edge and joined at the corners.

*The floor* of the platforms is in this lobo supported in a different manner. On the frame above mentioned ( $a^4$ ,  $a^5$  in Fig. 84) as well as just outside the floor frame there are put a number of forked props ( $e$  in Figs 85, 87), holding long



1:100.

Fig. 84. The temple of Tikala.

a<sup>1</sup>—a<sup>5</sup>: foundation; c, c<sup>1</sup>: floor frame; d, d<sup>1</sup>: walls; g—g<sup>1</sup>, g<sup>2</sup>: roof-truss.



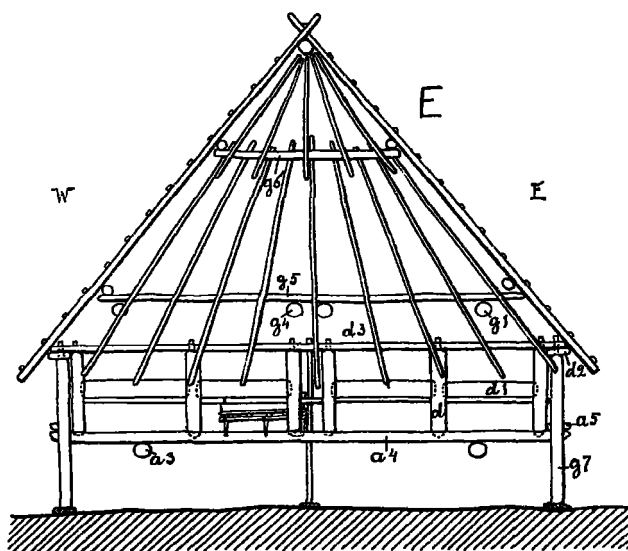
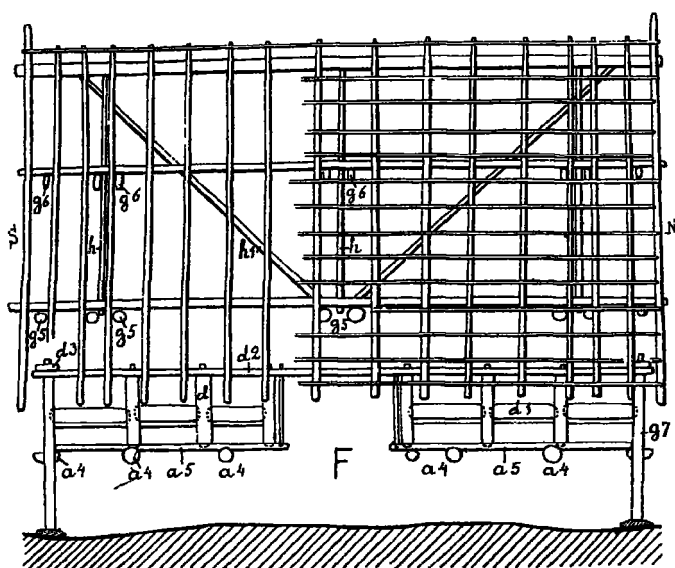


Fig. 86. The temple of Tikala.

a<sup>1</sup>—a<sup>5</sup>: foundation; d—d<sup>5</sup>: walls; g<sup>1</sup>—g<sup>7</sup>: roof-truss; h: inner rafters; h<sup>1</sup>: slanting props, belonging to the roof.



bars across which are placed a great number of sticks forming the support of the boards of the platforms.

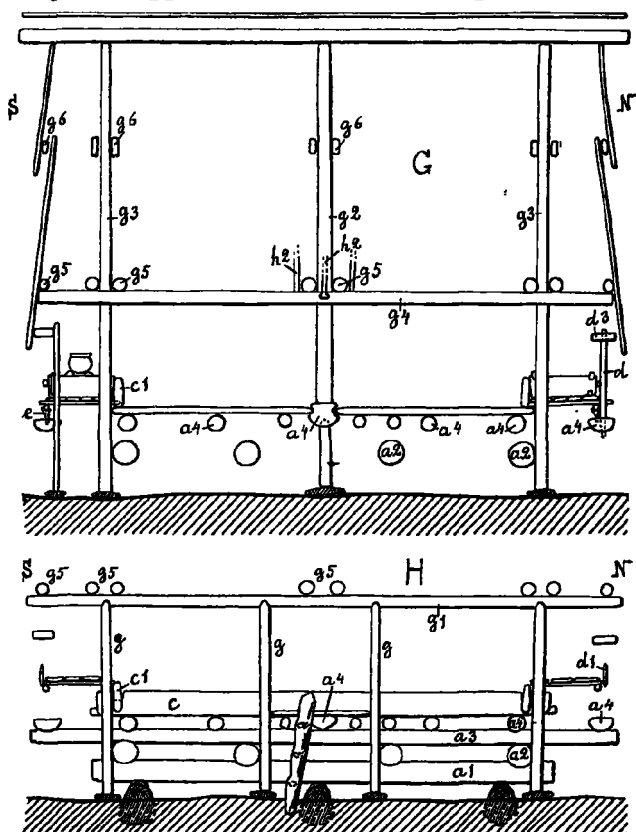


Fig. 87. The temple of Tikala. 1:100.  
a<sup>1</sup>—a<sup>4</sup>: foundation; c, c<sup>1</sup>: floor frame; d—d<sup>3</sup>: walls; e: props, supporting a bar at the bottom of the platforms; g—g<sup>6</sup>: roof-truss.

The fireplaces are the usual two, one of them being almost fallen to pieces. The construction is the usual one. The foundation is made in almost the same manner as in the Soengkoe lobo.

There are *walls* all round the outsides of the platforms. On the top of the frame round the house are raised a number of short planks (*d* in Figs 84—87), ending by taps, fitting in the holes of an upper frame of planks (*d*<sup>2</sup>, *d*<sup>3</sup> in Figs 85—87). The frame is at the corners supported by 4 posts (*g*<sup>7</sup> in Figs 84, 86), resting on stones. Between two upright planks is pushed in a single board (*d*<sup>1</sup> in Figs 84—87).

*The roof-truss* resembles that of the Mataoe lobo as well as that of the Soengkoe lobo. Outside the floor frame are placed on the top of flat stones 3 heavy poles at the west side, 4 at the east (*g* in Figs 84, 85, 87). They are scooped out a bit at the top, carrying two strong poles (*g*<sup>1</sup> in Figs 85—87), running from one gable to the other.

The ridge bar is in this lobo supported in the same manner as in the ones already described by 3 high posts (*g*<sup>2</sup>, *g*<sup>3</sup> in Figs 84, 85, 87), the one in the center placed on the big pole or beam in the middle of the floor, the two near the gables on flat stones.

On a level with the long poles at the sides (*g*<sup>1</sup> in Figs 85—87) there is a pair of poles or bars tied to the three posts in the middle of the structure (*g*<sup>4</sup> in Figs 85—87). Across them are placed 3 pairs of joists as well as an odd joist at each gable (*g*<sup>5</sup> in Figs 85—87). Right above these joists, half way to the ridge there is another row of joists of the same number as the ones below (*g*<sup>6</sup> in Figs 85—87).

*The roof* does not consist of rafters in two layers as in the other lobos. On each side there is however in three places a second bar (*h* in Figs 85, 86), but so close to the real rafters that they must be considered as belonging to them as well as two bars being placed diagonally to the rafters (*h*<sup>1</sup> in Fig. 86). Besides there are 3 props, radiating from the center post to the roof (*h*<sup>2</sup> in Figs 85, 87).

*The roofing* is the usual one of big shingles.

*The entrance* is placed in the middle of the eastern long side of the lobo.

*The staircaise* is made of a log in which some steps are cut out.

The only *adornment* is some shingles being carved at the bottom in the shape of horns, or of a head.

*Movables.* High up at one gable post were hanging a couple of brass plates with offerings to the spirits, a pot, and a kind of baskets for offerings (Fig. 83). There were also some drums, three of which had hide at both ends. Two smaller drums were open at one side. The hides of all of them were fastened to the drums by means of ratan strips, and stretched by a rope, running in zigzag, as well as by wedges.

## Iwongko (Lindoe Island).

The construction of this lobo resembles that of the other lobos of the Koelawi type. Some details remind one of the Mataoe lobo, others of the Soengkoe lobo, still others of the lobo of Boladangko.

It is situated in the south part of the chief village, nowadays uninhabited, of the Lindoe Island. The gables turn toward the north and the south (340°). This lobo is the biggest lobo of Koelawi type.

It measures 11,70 m. by 11,45 m.

The *foundation* reminds one to certain extent of that of the Mataoe lobo, only it is simpler. It is remarkable that there are only *two* layers of logs (a<sup>1</sup>, a<sup>2</sup> in Figs 88—90, 93, 94). Consequently the floor planks will not run from one gable to the other, but are parallel to the gables. Nevertheless they are not made in one piece but in two, as it is in the other lobos. The inner ends rest in a groove along the beam in the middle of the floor (a<sup>2</sup> in Figs 88—90).

In one of the boards, SE. of the main post in the center of the temple, there was a shallow pit (b in Fig. 89) which was said to have been used to hold a man's head, either that of an enemy, taken as a trophy in headhunting, or a head, fallen by the sword of the headsman.

The *frame of the floor* consists of 4 heavy planks (c, c<sup>1</sup> in Figs 89, 90, 93, 94), put on edge, just as in the lobo of Tikala.

There are *platforms* all round the lobo. The floor is made of planks, resting on sticks, one end of which is placed in notches in the floor frame, the other on a founda-

tion (Figs 93) like that of the gables in the lobo of Mataoe.

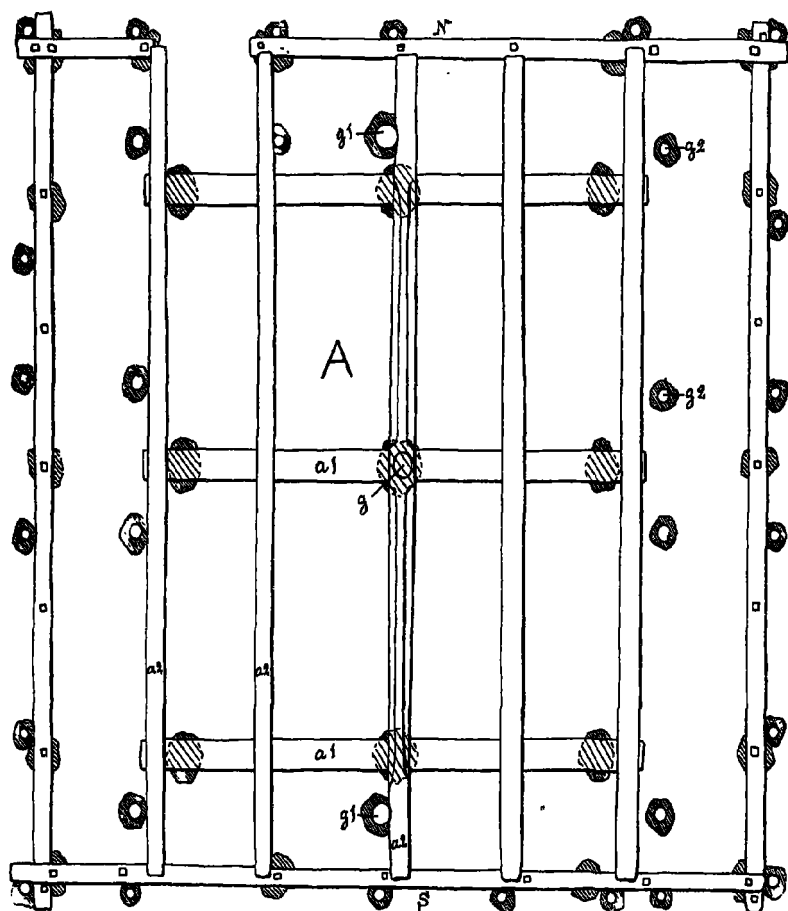


Fig. 88. The temple of Iwongko, Lindoe Island.  
a<sup>1</sup>, a<sup>2</sup>: foundation; g—g<sup>2</sup>: roof-truss.

*The fireplaces* are two in number, one at each gable, made in the usual manner. How the foundation is constructed can be seen in Figs 89, 90, 94.

The platforms have a low wall, made of a single plank (d in Figs 90—92), put on edge and fastened to the poles

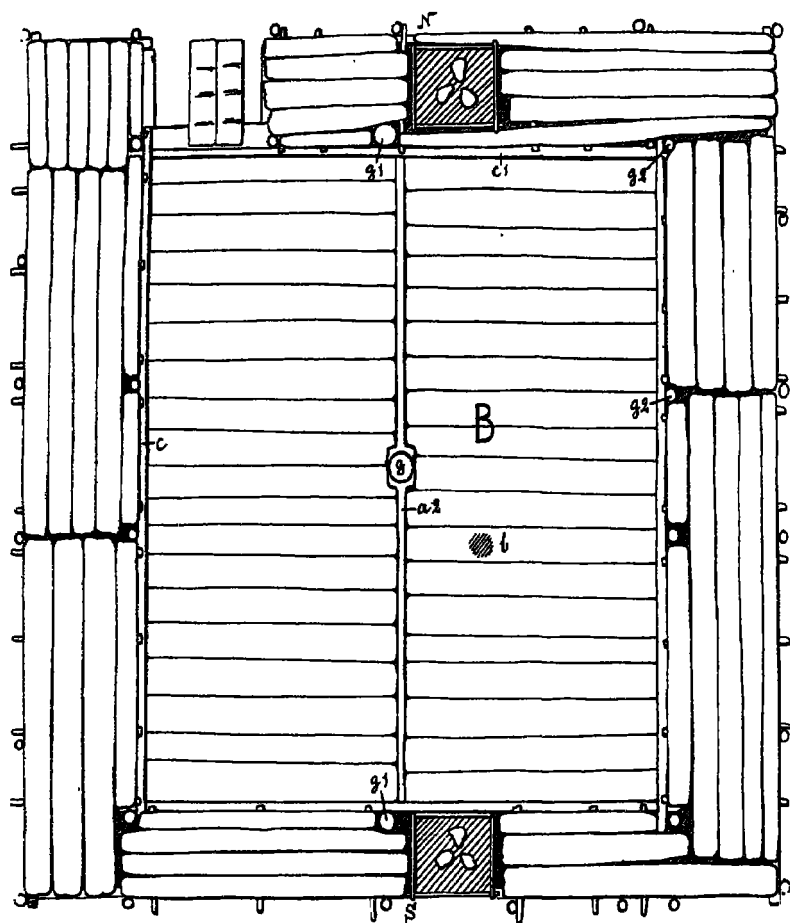


Fig. 89. The temple of Iwongko.

$a^2$ : beam in the middle of the floor;  $b$ : hollow in the floor plank;  $c$ ,  $c^1$ : floor frame;  $g$ — $g^2$ : roof-truss.

raised all round the lobo, close to the platforms (Figs 90—92). The poles are at the top tied to a frame of 4 long, rather

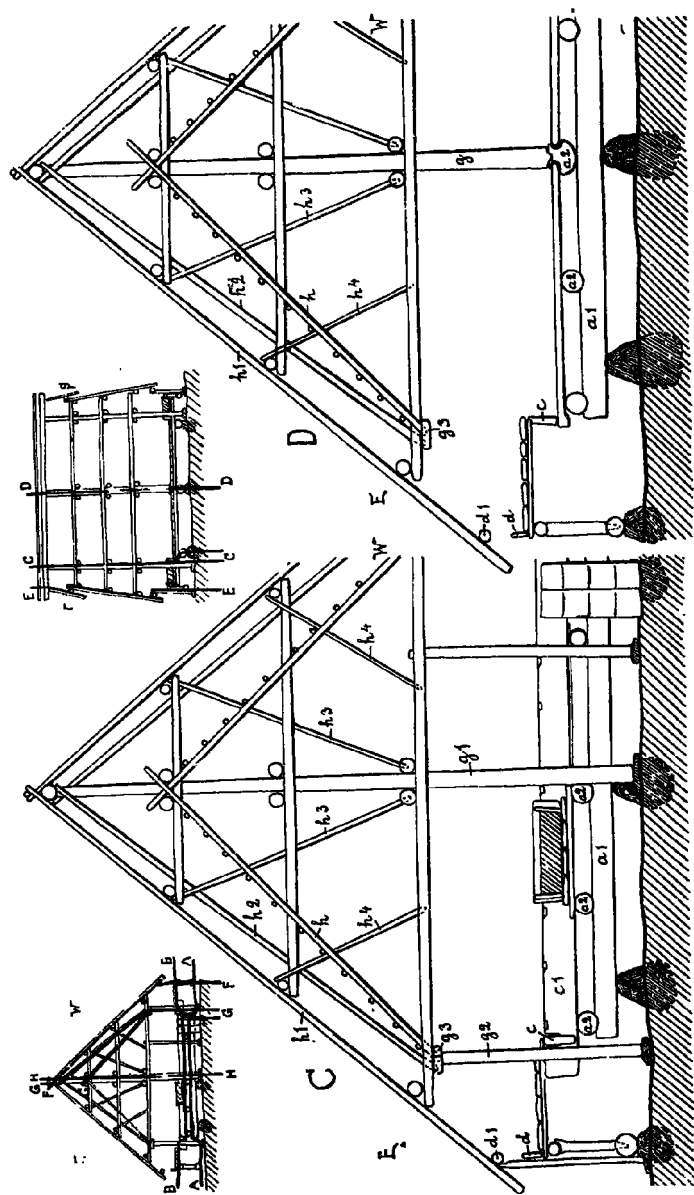


Fig. 90. The temple of Ivongko.

a, a': foundation; c, c': floor frame; d, d': walls; g, g': roof-truss; h--h': rafters; h<sup>2</sup>, h<sup>1</sup>: slanting props, supporting the rafters.

The miniature drawings show the place of the sections A--H.

heavy bars ( $d^1$ ,  $d^2$  in Figs 90—94), forming the support of the edge of the roof.

The *roof-truss*. Along the floor there are just outside

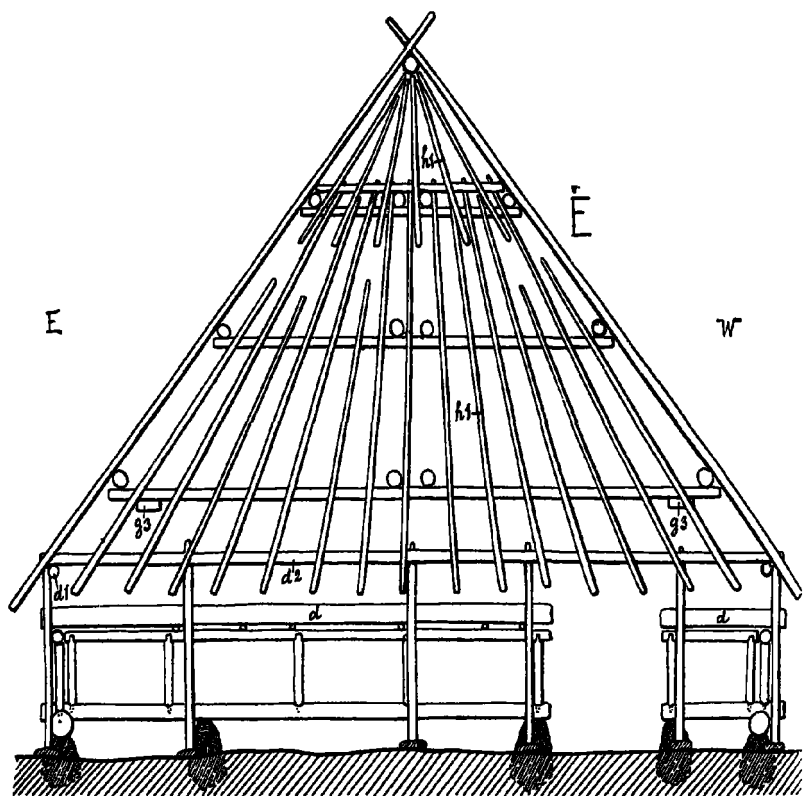


Fig. 91. The temple of Iwongko.

$d$ — $d^2$ : walls;  $g^2$ : beams, belonging to the roof-truss;  $h^1$ : rafters.

the floor frame some poles ( $g^3$  in Figs 88—90, 93), resting on flat stones. The tops are pointed so as to fit in holes in two planks ( $g^3$  in Figs 90, 91, 93), running from one gable to the other. Beside these planks and the frame ( $d^1$ ,  $d^2$  in Figs 91, 92) resting on the top of the poles round



the structure, the roof is supported by the usual 3 main posts (g, g<sup>1</sup> in Figs 88—90, 94), coming up to the ridge, the one in the center standing on the floor, the other two on flat stones on the ground.

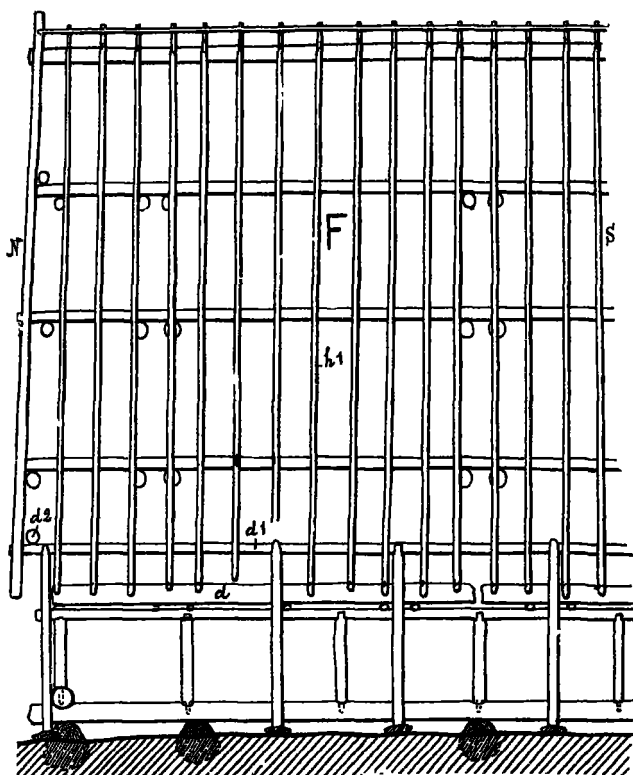


Fig. 92. The temple of Iwongko.  
d—d²: walls; h¹: rafters.

1:100.

The roof is double, the inner part consists of 16 pairs of rafters (h in Figs 90, 93) the bottom of which rests in the planks of the upper frame (g<sup>3</sup> in Figs 90, 93). Across the rafter are fastened by means of ratan strips a number of battens. The outer roof has a great number of rafters

close to each other ( $h^1$  in Figs 90—94). Between the inner and the outer roof there are on each side three rafters, standing on the same plank as the inner roof and crossing below the pole of the ridge ( $h^2$  in Figs 90, 93). In the

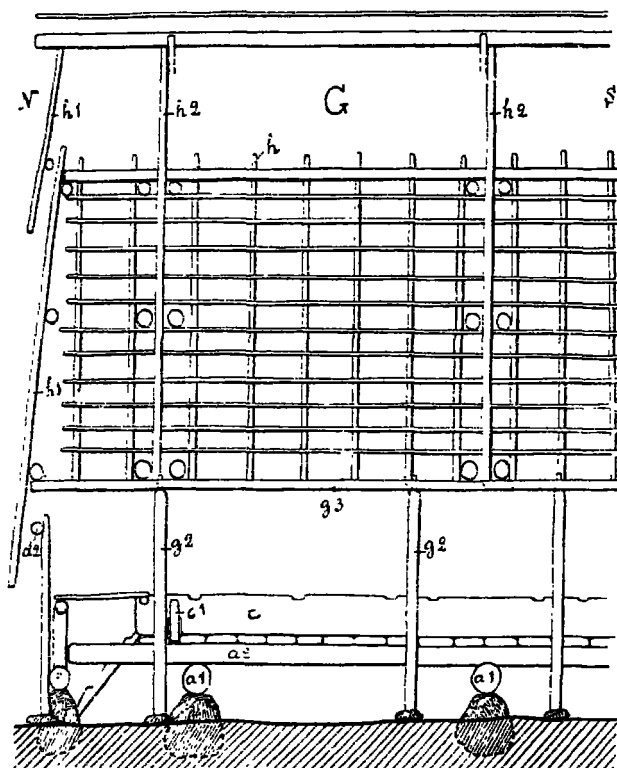


Fig. 93. The temple of Iwongko.

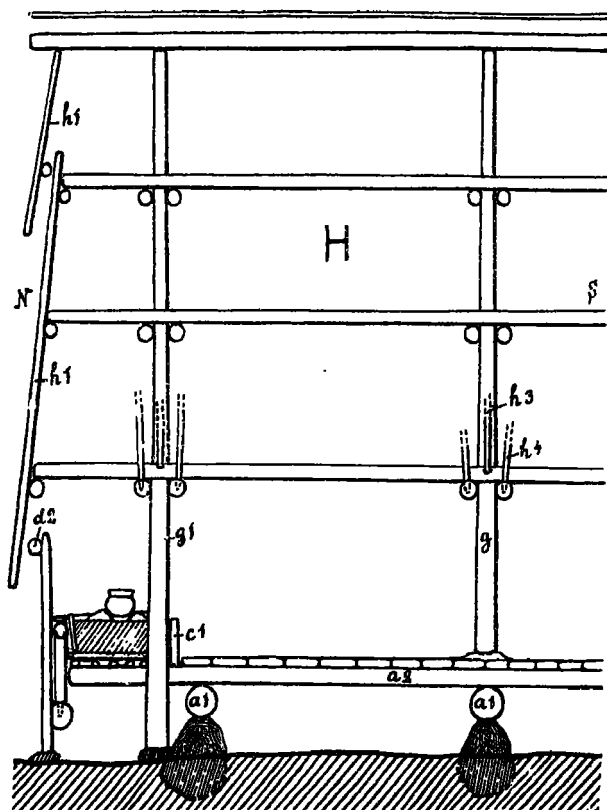
$a^1$ ,  $a^2$ : foundation;  $c$ ,  $c^1$ : floor frame;  $d^1$ : upper wall frame;  $g^1$ ,  $g^2$ : roof-truss  
 $h$ — $h^2$ : rafters

same manner as in the Soengkoe lobo there are a number of shorter and longer slanting props ( $h^3$ ,  $h^4$  in Figs 90, 94).

The construction of the gables is the same as that of the Boladangko lobo for instance.

The roofing is the usual one of big shingles, fastened to lines of ratan instead of battens.

The entrance is at the north gable, near the western corner.



1:100.

Fig. 91. The temple of Iwongko.

a<sup>1</sup>, a<sup>2</sup>: foundation; c<sup>1</sup>: floor frame; d<sup>2</sup>: walls; g, g<sup>1</sup>: roof-truss; h<sup>1</sup>: gable rafters; h<sup>3</sup>, h<sup>4</sup>: slanting props.

The staircase is made of two heavy logs placed abreast in which steps are cut out.

There was no other kind of adornment to be found

than the usual shingles at the bottom of the roof, carved in the shape of horns or hooks.

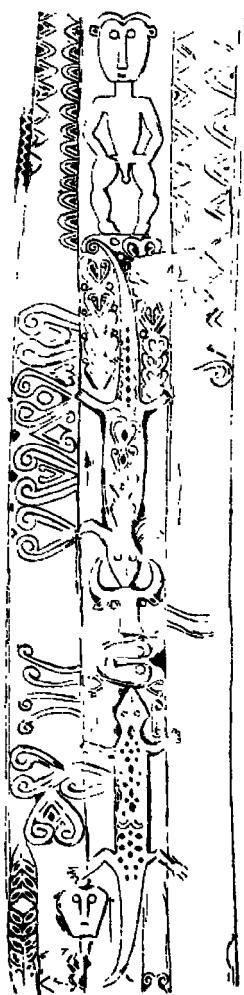
As to *movables* there was a good deal to be seen in this lobo. From the roof the usual small offer baskets were hanging down. At the center post a little of everything was fastened as for instance a shield, very likely the same as the one, mentioned by the Sarasins at their visit in 1902. It was a bit different from the other shields that I saw in these districts, being much broader and ornamented in another manner. It is like all shields adorned with hair and small pieces of bone in rows, but here the pieces of bone are like small round buttons, placed by pairs, instead of triangles as on the common shields.

At the center posts were also fastened a great number of bamboo sticks, having at the top a brush of dry



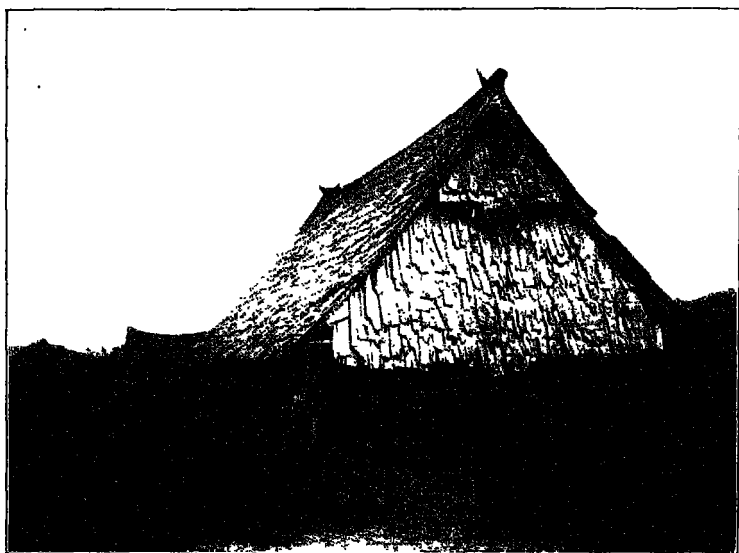
Fig. 95. The temple of Iwongko  
Balola, implement of execution. (Doctor  
Kaudern's collections.)

grass. Between them I found 7 or 8 crosses, made of bamboo and in bad condition, apparently very old. They were called *balola* (Fig. 95). Before the Dutch became masters of the country, the *balola* was used as an implement of execution. It is made of a very strong kind of bamboo, called iron bamboo. The long limb of the cross is 140—150 cm., the short one about 50 cm. The limbs are tied together by means of strong strips of ratan. As can be seen in the figure, there is a strong rope of ratan passed through the top of the long bamboo, ending in a loop which can when it is necessary, be pulled in. The loop of the *balola* was placed round the neck of the person who was sentenced to death, and his hands were stretched forward and tied to the ends of the short limb of the cross. A strong man held the *balola* in his hands, and if the victim was recalcitrant he had only to pull the rope tighter round his neck. The execution was made by another man who used a big sword to separate the head of the victim from the body. The old sword was still there, pushed in underneath the roof at the east side of the lobo. When the victim was beheaded, the ropes round his hands were cut, the loop round his neck was free when the head had fallen. After the performance the *balola* was kept in the lobo and never more used.



1:10.  
Fig. 96. Wood carving from an old drum in the temple of Iwongko on the Lindoe Island.

At the time of the visit of the Sarasins there were several drums with beautiful carvings in this lobo. When I was there in 1919 only one was left. I tried to obtain it in order to save it, but the natives would not let me have it. The only thing I then could do was to make a representation of the carvings on the middle of it (Fig. 96).



W. Kaulern Photo.

Fig. 97. The temple of Winatoe.

### Winatoe.

In the SW. corner of the village is situated a lobo the construction of which very much resembles that of the lobos already described, but it is bigger and in better condition than for instance the lobos of Soengkoe and Bola-dangko. However, I am sorry to say, I have not measured it or examined it closely.

The gables turned more or less toward the north and the south. The floor was made in the same manner as in the other lobos with a cross plank in the middle. The entrance was at the western side.

The roof and the truss were constructed almost in the same manner as we have seen in the other lobos. There was a roofing of big shingles, some of them carved at the bottom of the roof in the usual way.

At the time of my visit, the temple was used as a prison. There was a mad murderer put in the stocks. Half naked he was sitting on a bed, the feet fastened in stocks of quite the same kind as those, formerly used in Europe.



W. Kaudern Photo.

Fig. 98. The temple in the middle of the district of Gimpoe.

## Gimpoe.

(The lobo in the middle of the district.)

This lobo is situated in the eastern part of the district. Its gables turn nearly toward the south and the north ( $18^{\circ}$ ).

It measures 9 m. by 7.5 m.

The foundation is here rather simple. There are 2 heavy logs at the gables, each placed on the top of two stones ( $a^1$  in Figs 99, 101, 103). Then there is a layer of 3 big logs ( $a^2$  in Figs 99—101, 103), the two side ones supported in the middle by a high stone. These logs run from one gable to the other, forming the support of the gable platforms. On the top of them are placed no less than 10 poles, and in the middle a log or beam, having along each side a groove to hold the inner ends of the floor planks ( $a^3$  in Figs 99, 101 D, 103). The 10 poles project beyond the layer below, forming the foundation of the side platforms.



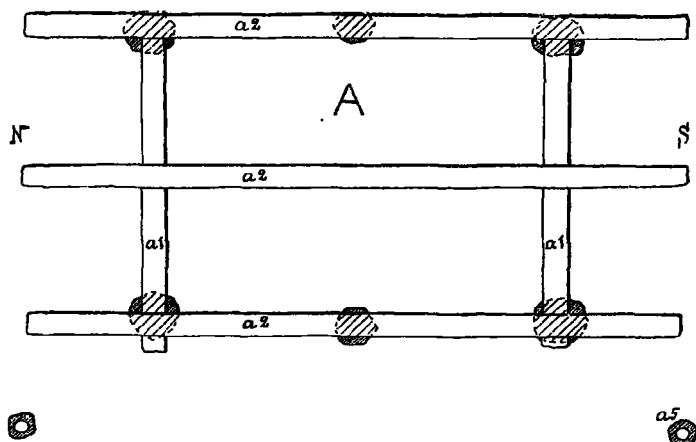
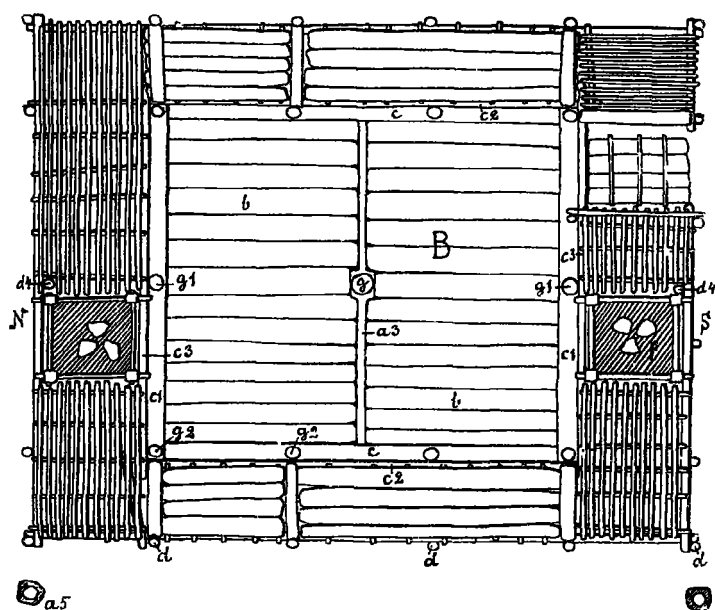


Fig. 99. The temple in the middle of the district of Gimpoc.  
 a<sup>1</sup>—a<sup>5</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d, d<sup>4</sup>: poles,  
 belonging to the walls; f: fireplace; g—g<sup>2</sup>: roof-truss.

1:100.

On the top of these poles there is at each side a long bar ( $a^4$  in Figs 100—102), forming with the outermost poles of the layer below a frame on which are placed the poles ( $d$  in Figs 99—103) supporting the platform as well as the bottom of the roof. At each corner there stands a pole on a flat

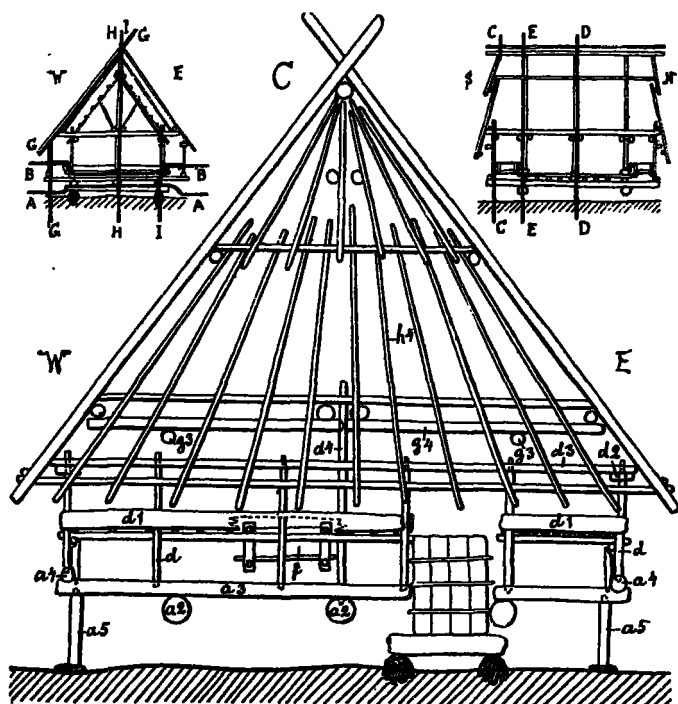


Fig. 100. The temple in the middle of the district of Gimpoe.  
 $a^2$ — $a^5$ : foundation;  $d$ — $d^4$ : walls;  $f$ : fireplace;  $g^3$ ,  $g^4$ : roof-truss;  $h^1$ : rafters.  
 The miniature drawings show the place of the sections A—I.

stone in order to increase the solidity of the frame ( $a^5$  in Figs 99, 100, 102).

*The floor.* The floor planks ( $b$  in Figs 99, 101, 103) are placed as usual on both sides of the heavy beam or plank in the middle of the floor in the longitudinal direction of the

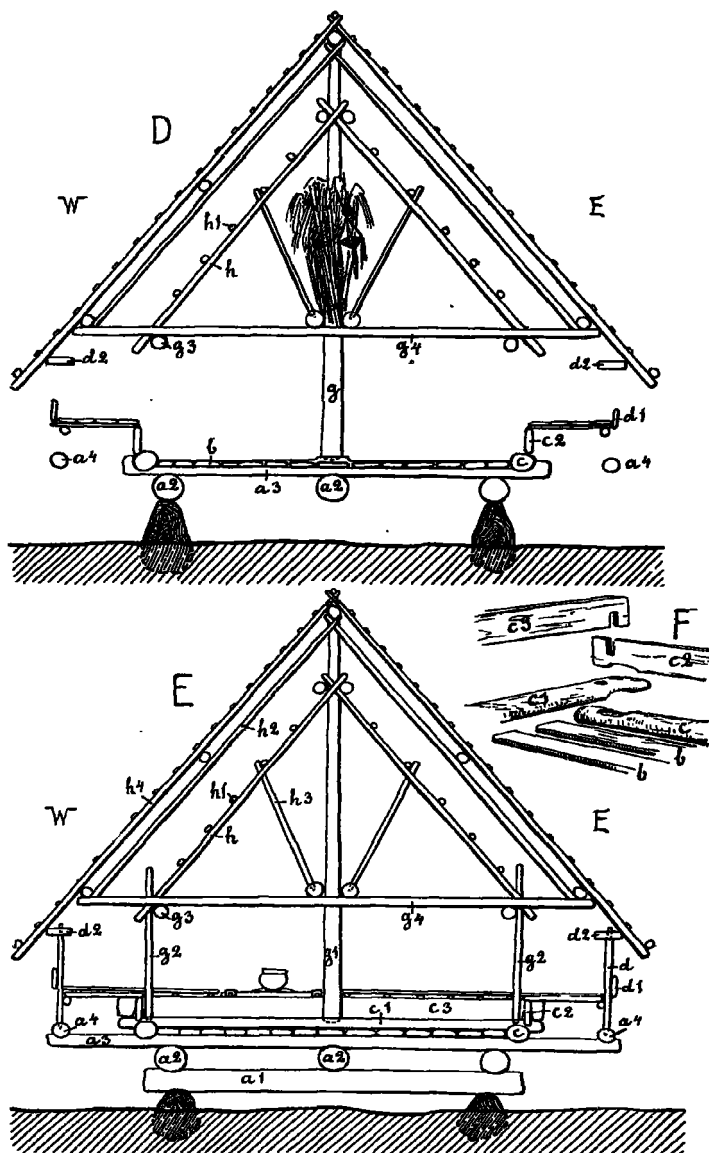


Fig. 101. The temple in the middle of the district of Gimpoee.  
 a<sup>1</sup>—a<sup>4</sup>: foundation; b: floor planks; c—c<sup>2</sup>: floor frame; d—d<sup>2</sup>: walls; g—  
 g<sup>4</sup>: roof-truss; h, h<sup>1</sup>: inner roof; h<sup>2</sup>, h<sup>4</sup>: roof; h<sup>2</sup>: slanting props, sup-  
 porting the inner roof.

lobo. The floor is bordered by a double frame. At each long side of the floor is a rather heavy pole (c in Figs 99, 101, 103), resting on the same poles as the planks. On the top of the planks there is at each short side a flat beam (c<sup>1</sup> in Figs 99, 101, 103) the ends resting on the side poles

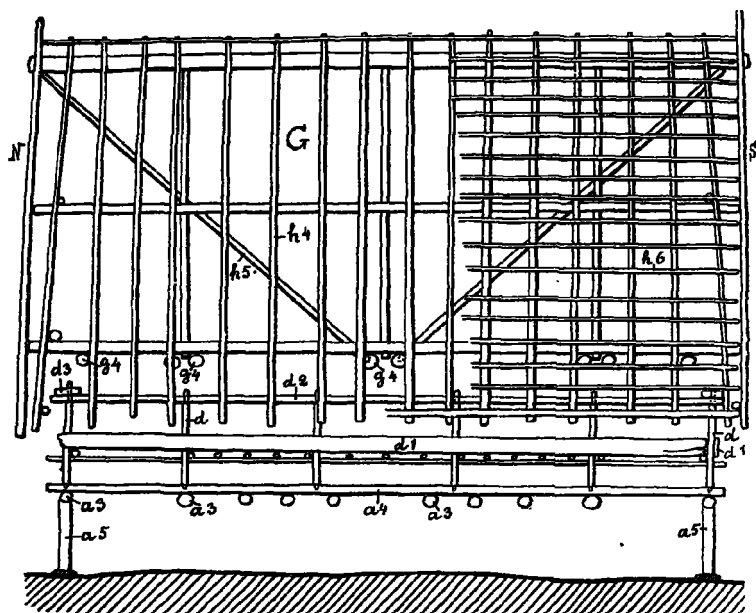
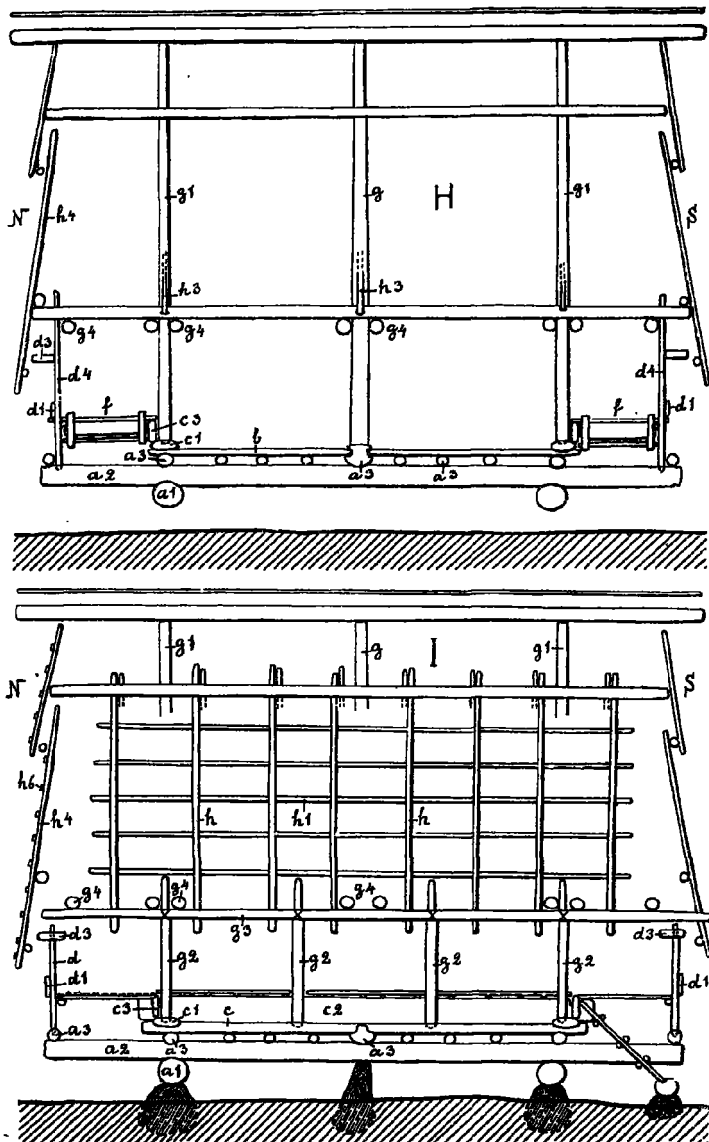


Fig. 102. The temple in the middle of the district of Gimpoe.  
a<sup>1</sup>—a<sup>2</sup>: foundation; d—d<sup>1</sup>: walls; g<sup>1</sup>: bars belonging to the roof; h<sup>1</sup>—h<sup>2</sup>:  
rafters.

of the frame. The outer and upper frame consists of 4 planks (c<sup>2</sup>, c<sup>3</sup> in Figs 99, 101, 103), put on edge, joined to each other as well as to the frame below (Fig. 101 F).

The construction of the *platforms* can be seen in Figs 101—103. The floor of the long platforms is made of planks, that of the gables of pinang laths.



1:100.

Fig. 103. The temple in the middle of the district of Gimpoe.  
 a<sup>1</sup>—a<sup>2</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d—d<sup>4</sup>: walls;  
 f: fireplace; g—g<sup>4</sup>: roof-truss; h—h<sup>8</sup>: rafters, battens and slanting props

There are two *fireplaces* (f in Figs 99, 100, 103), one at each gable. They have as in the other lobos the shape of a shallow box, filled with earth, but they do not rest on the top of the poles of the foundation, but are hanging on the plank frame of the floor and on the poles outside the platforms (Figs 99, 100, 103).

*The walls* are very low, only forming a border of the platforms. They are made of long boards, one at each side (d<sup>1</sup> in Figs 100—103), bound to the poles, supporting a frame of 4 planks at the top of the platforms (d<sup>2</sup>, d<sup>3</sup> in Figs 100—103).

The above mentioned poles are pointed in order to fit in holes in the plank frame. At each gable there is in the middle a pole, somewhat higher than the rest, standing in a notch in the log in the middle of the foundation (d<sup>4</sup> in Figs 99, 100, 103).

*The roof-truss.* On the inner floor frame are placed 4 heavy poles along the sides (g<sup>2</sup> in Figs 99, 101, 103). In the middle of the short sides is a post of the same height as the post in the center of the structure (g<sup>1</sup>, g in Figs 99, 101, 103). The three together carry the pole of the ridge. Outside the 4 poles is bound a long rather heavy bar (g<sup>3</sup> in Figs 100, 101, 103). On the top of the two long bars are placed 3 pairs of bars, serving as joists, as well as an odd joist at the gables (g<sup>4</sup> in Figs 100—103).

The rafters of the inner roof, 8 pairs in number (h in Figs 101, 103) rest on the long bars and are kept by 5 long bamboos (h<sup>1</sup> in Figs 101, 103); tied outside them. The rest of the construction can easily be followed in the figures.

*The roofing* is the usual one of big shingles.

*The entrance* is situated at the south gable near the S E. corner.

*The staircase* is made of 4 short planks, placed abreast. There were 3 pairs of sticks, tied together at the end, so

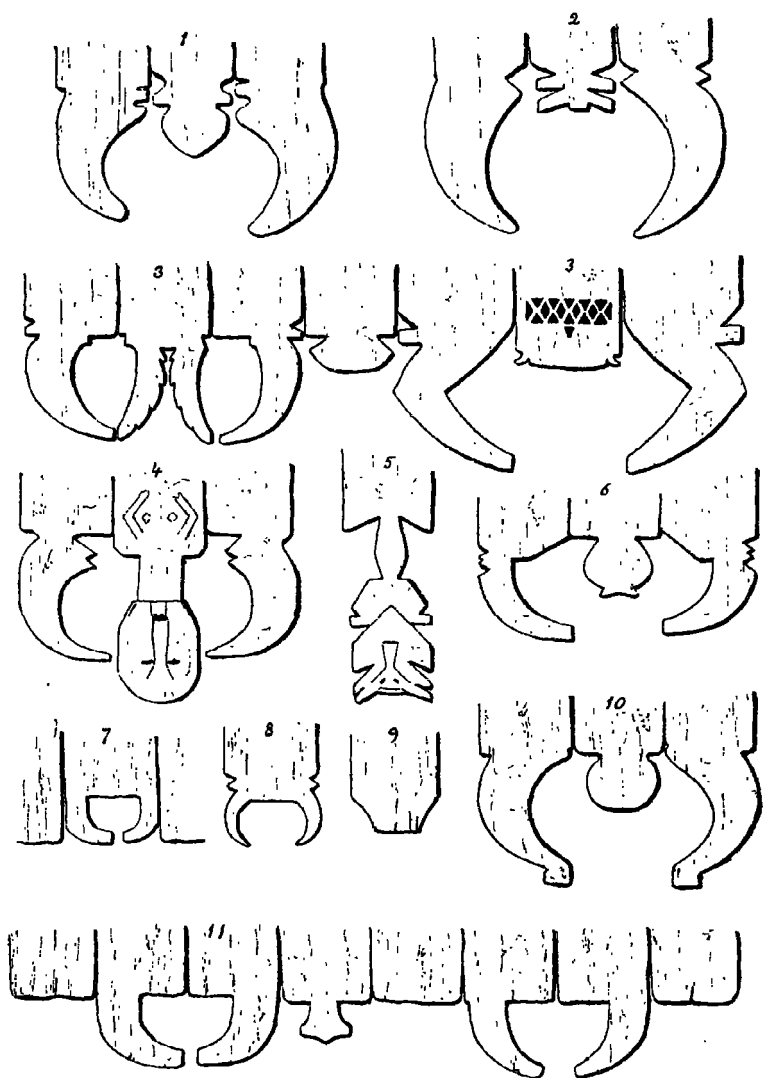


Fig. 104. Shingles from the temples of NW. Central Celebes, carved at the bottom.

1, 2: from Soengkoe in Koelawi; 3: from the entrance of the temple in the middle of the district of Gimpoe. 4, 5: from the northern temple of Gimpoe; 6, 8, 9: from one long side of the roof of the Gimpoe temple in the middle of the district; 7: from Siwongi in Tobakoe; 10: from Winatoe. 11: from the entrance of the temple of Bolapapoe in Koelawi.

that one stick was on the back of the planks, the other in the front, forming a step (Figs 100, 103).

There are no other *adornments* than some shingles at the edge of the roof, carved in some way or other (Fig. 104: 3, 6, 8, 9).

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## Gimpoe.

(The lobo in the north part of the district.)

This lobo belongs to a village, situated north of the previous one. The lobo is found on the east side of the road running in the middle of the village. The gables very nearly turn toward the north and the south ( $355^{\circ}$ ). It is a little smaller than the lobo south of it, measuring only 7,5 m. by 5,5 m. The construction is about the same as that of the previous lobo.

As to adornments, there were only a few shingles at the bottom of the roof, carved in the shape of human beings in a manner that I never observed at any other place (Fig. 104: 4, 5).

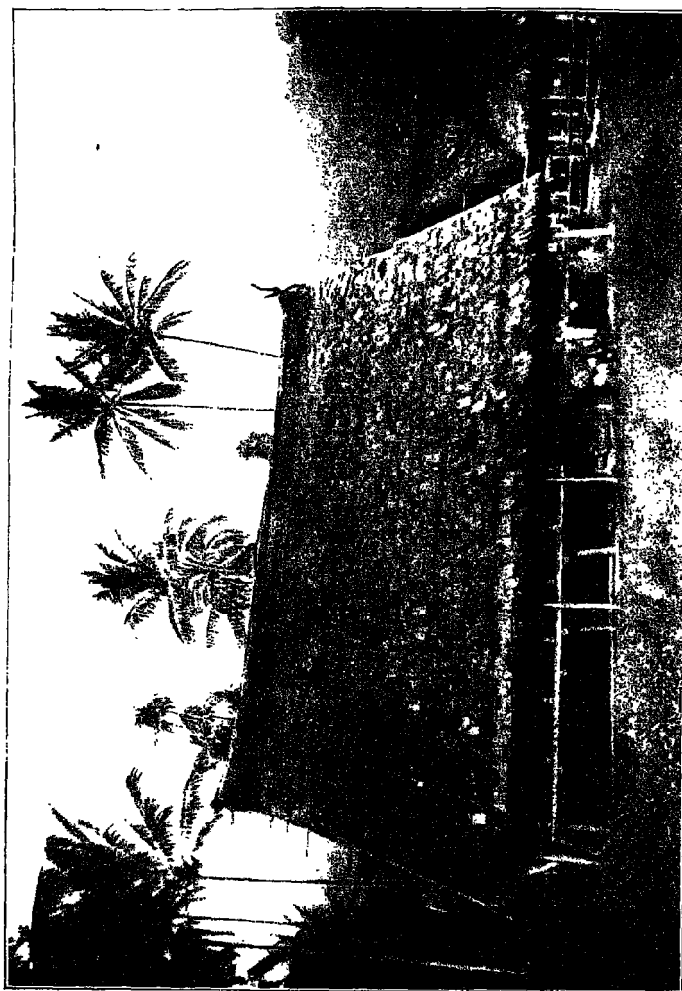


Fig. 105. The temple of Toro.

W. Kanden Photo.

## Toro.

As I have already mentioned this lobo is not throughout constructed as a genuine Koelawi lobo. It is a composition of this type and the Kantewoc type.

It is situated in the southern part of the chief village of the Toro Valley, on three sides surrounded by houses. The gables very nearly turn toward the north and the south ( $5^{\circ}$ ).

It measures 13.40 m. by 9.85 m.

*The foundation* consists of a number of heavy logs, placed in 5 layers. At the bottom there are 4 logs, each resting on 5 flat stones, put on edge, two at each end and one in the middle ( $a^1$  in Figs 106, 108, 111, 112). In the second layer which is placed in the longitudinal direction of the temple, there are only 3 long logs ( $a^2$  in Figs 106, 108, 109, 111, 112). The 3:rd layer consists of 4 logs of about the same length as the ones at the bottom ( $a^3$  in Figs 108, 111, 112). and the 4:th layer of 3 poles so long as the whole lobo ( $a^4$  in Figs 108, 109, 111, 112). In the top layer there are a great number of long heavy bars, and in the middle a beam with a groove along each side, meant to hold the floor planks ( $a^5$  in Figs 107—112). The beam is much shorter than the bars, and of the same length as the logs of the bottom layer and of the 3:rd layer. At the end of the bars, there is on each side a long bar, forming with the outermost bars of the layer below, a frame ( $a^6$  in Figs 108—110), supporting a number of props to the platforms ( $e$  in Figs 109—112).

In this lobo *the floor* is made in the same manner as in the other lobos ( $b$  in Fig. 107). The planks however are

here comparatively short, depending on *the platforms*, being at the gables two, forming so to say two broad steps (Fig. 112).

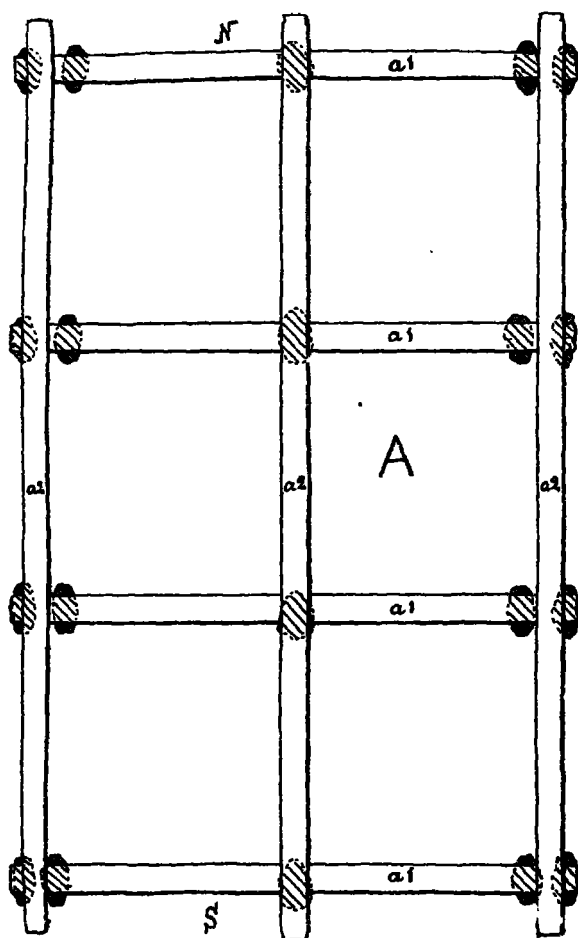


Fig. 106. The temple of Toro.  
a<sup>1</sup>, a<sup>2</sup>: foundation.

The long platforms are of the usual appearance. *The floor frame* is made in the same manner as in the Gimpoe lobo, but here it does not only enclose the floor itself but

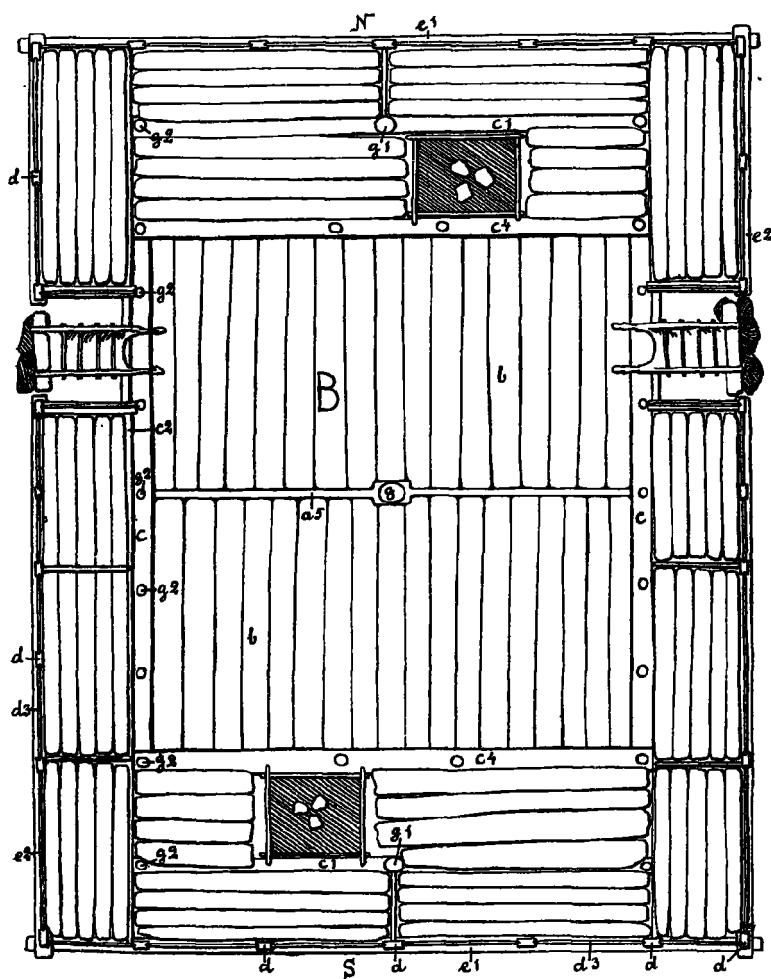


Fig. 107. The temple of Toro.

a<sup>5</sup>: log in the middle of the top layer of the foundation; b: floor planks;  
 c—c<sup>4</sup>: floor frame; d, d<sup>3</sup>: walls; e<sup>1</sup>, e<sup>2</sup>: frame of the platforms; g—g<sup>2</sup>: poles  
 belonging to the roof-truss.

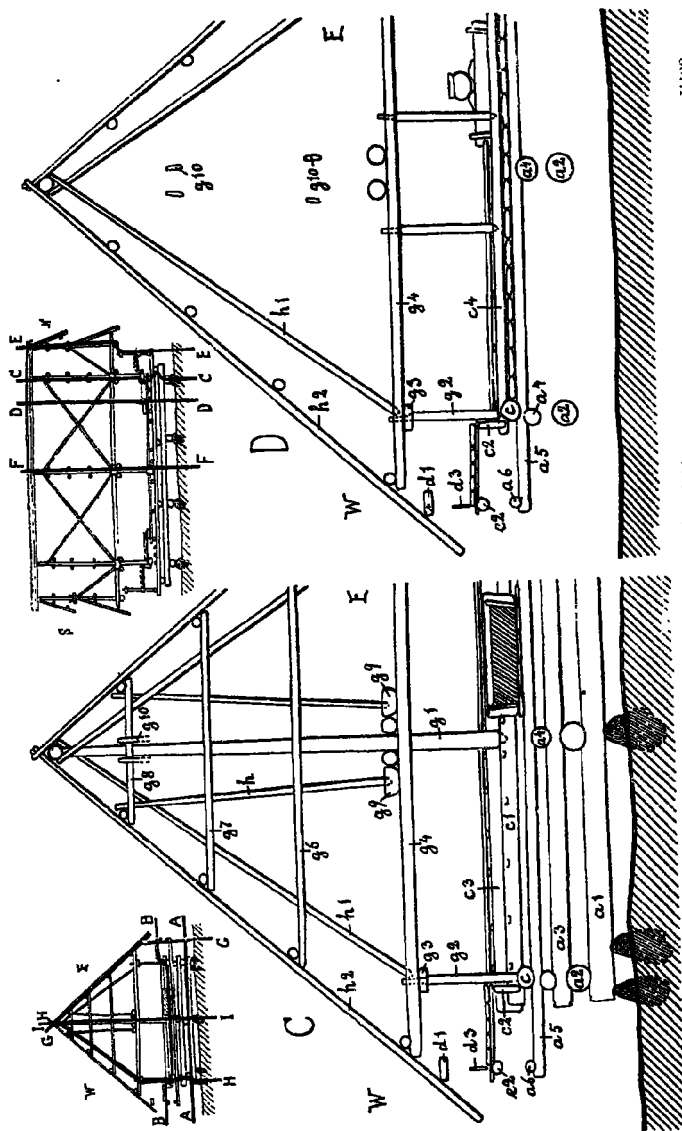


Fig. 108. The temple of Toro.  
 a<sup>1</sup>—a<sup>9</sup>: foundation; c<sup>1</sup>—c<sup>9</sup>: floor frame; d<sup>1</sup>—d<sup>9</sup>: walls; e<sup>1</sup>—e<sup>9</sup>: platform; g<sup>1</sup>—g<sup>9</sup>: rafters and their props.  
 The miniature drawings show the place of the sections A—I.

1:100.

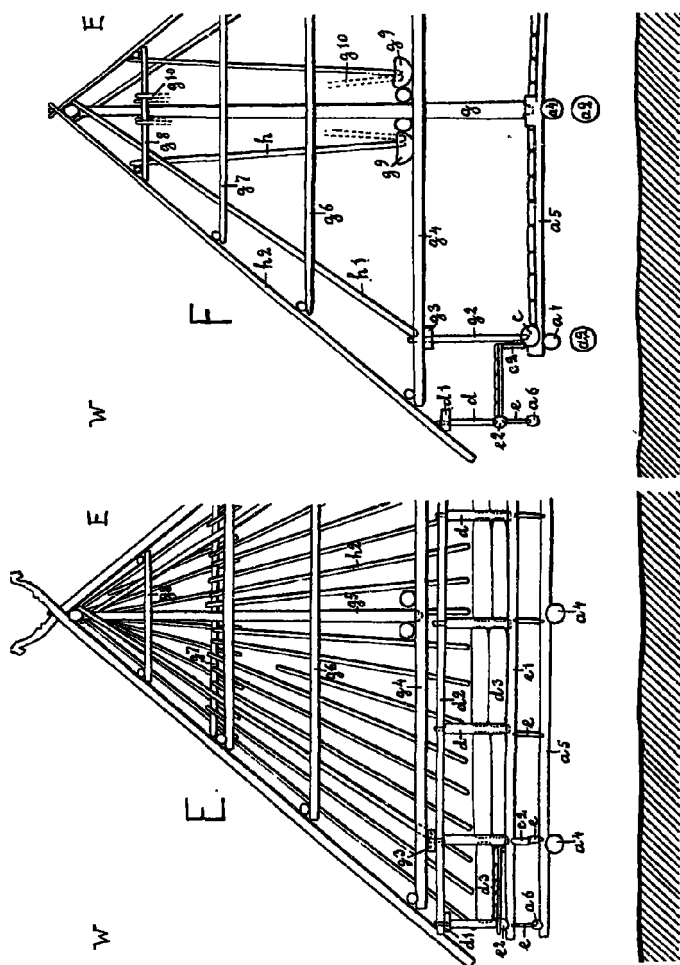


Fig. 101. The temple of Foro,

a<sup>1</sup>—a<sup>4</sup>: foundation; c, c<sup>2</sup>: floor frame; d—d<sup>2</sup>: walls; f—f<sup>2</sup>: platforms;  
g—g<sup>2</sup>: roof truss; h—h<sup>2</sup>: rafters and their props.

1:100.

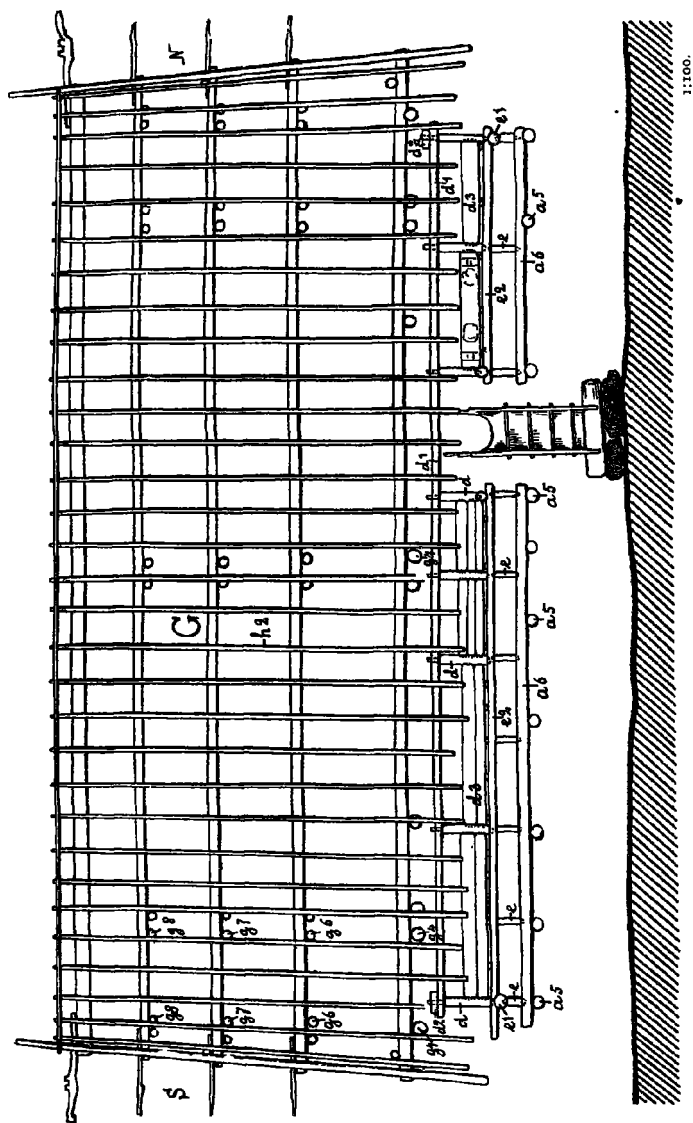


Fig. 110. The temple of Toro.  
 n<sup>2</sup>, a<sup>2</sup>: foundation; d—d<sup>2</sup>: walls; g—g<sup>2</sup>: platforms; h—h<sup>2</sup>: roof truss; h<sup>2</sup>: rafters.



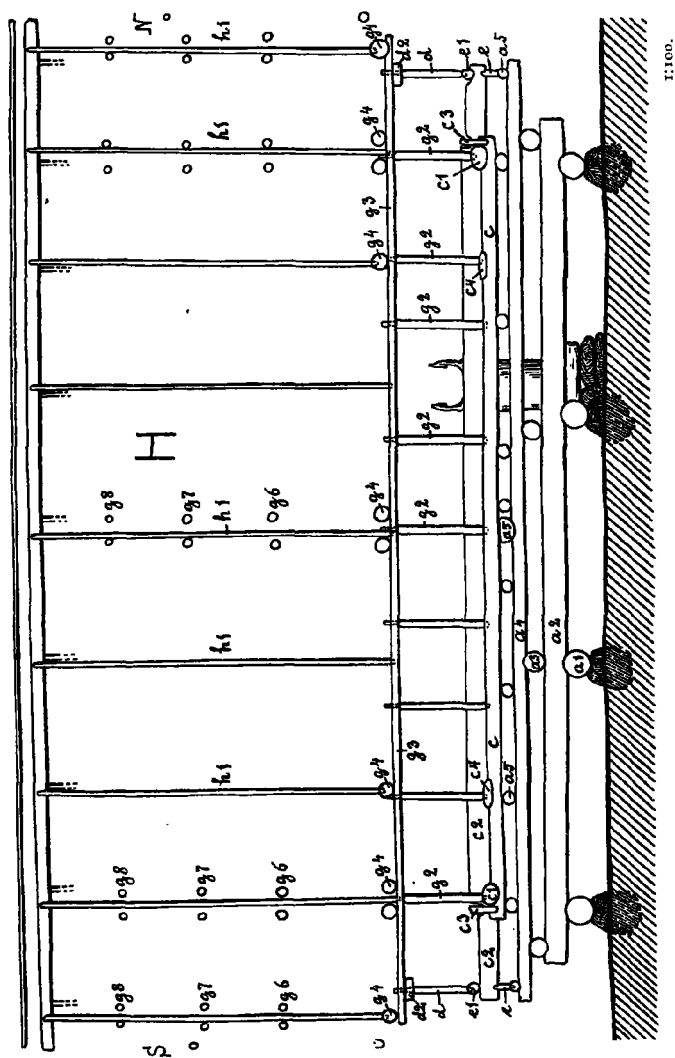
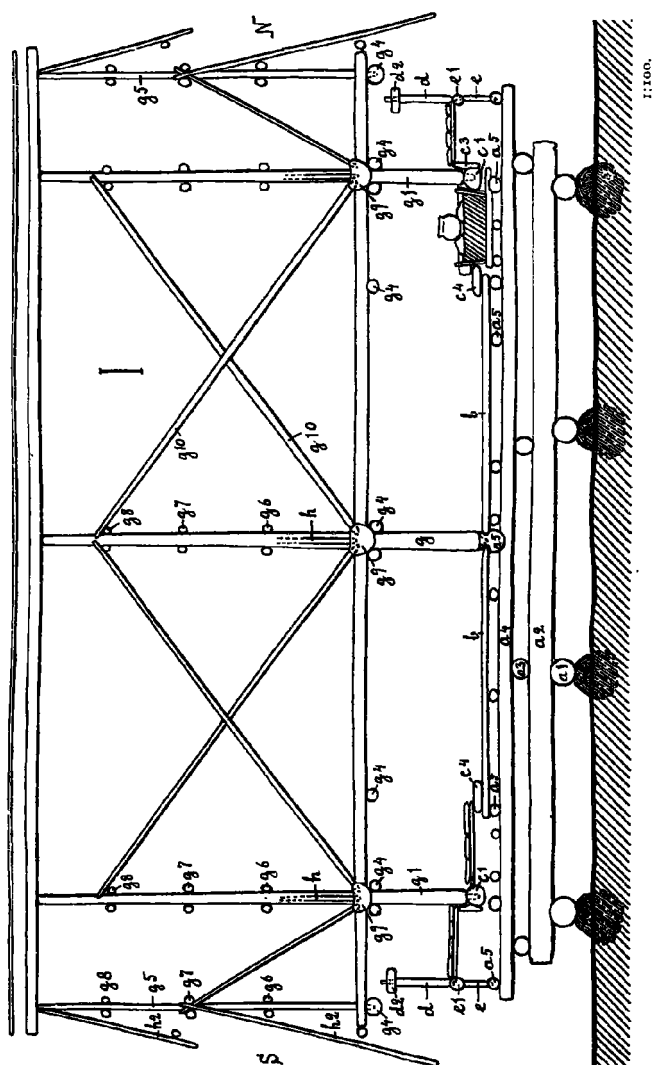


Fig. 111. The temple of Toro.

a<sup>1</sup>—a<sup>5</sup>: foundation; c—c<sup>1</sup>: floor frame; d, d<sup>1</sup>: walls; e, e<sup>1</sup>: platforms; g<sup>1</sup>—g<sup>5</sup>: roof-truss; h<sup>1</sup>: inner rafters.



1:100.

Fig. 112. The temple of Toro.

a<sup>1</sup>—a<sup>2</sup>: foundation; b: floor planks; c<sup>1</sup>—c<sup>2</sup>: floor frame; d, d<sup>2</sup>: walls; e, e<sup>1</sup>: platforms; g—g<sup>10</sup>: roof truss; h: slanting props belonging to the roof; i<sup>2</sup>: gable rafters.

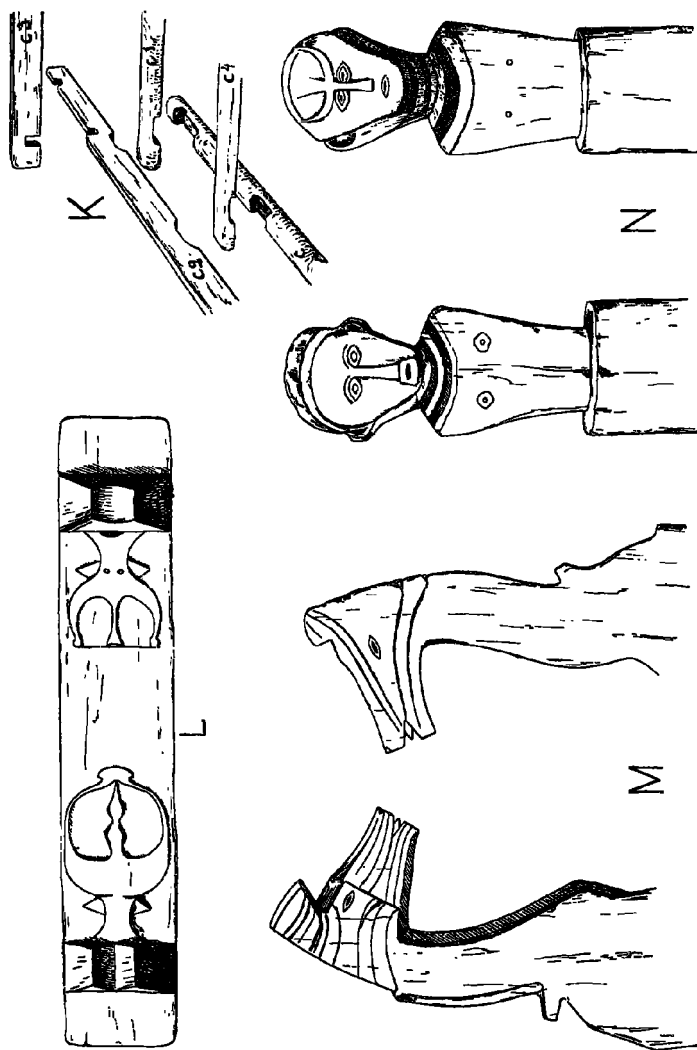


Fig. 113. The temple of Toro.

K: one corner of the floor frame; c-c': floor frame; c': plank on top of the floor. L: wall plank with wood carvings (east entrance to the right); M: the upper part of the western staircase; N: the upper part of the eastern staircase.

L. 1:10; M, N. 1:10

also the inner gable platforms. The inner frame is made of 4 poles (c, c<sup>1</sup> in Figs 107—109, 111, 112, 113 K), the outer and upper frame of 4 planks put on edge (c<sup>2</sup>, c<sup>3</sup> in Figs 107—109, 111, 112, 113 K). Between the floor and the gable platforms, there is a plank, placed on the top of the floor planks (c<sup>4</sup> in Figs 107, 108, 111, 112, 113 K).

The floor of the platforms is made of planks, resting on sticks. These are at the inner gable platforms supported by the inner floor frame and the plank on top of the floor planks (Fig. 112). The sticks of the second gable platform rest on the outer floor frame and on a frame of bars (e<sup>1</sup>, e<sup>2</sup> in Figs 107—112), supported by props, placed on the top of the frame of bars already mentioned in connection with the foundation (e in Fig. 109).

From the upper frame of bars (e<sup>1</sup>, e<sup>2</sup>) rise a number of poles, cut flat (d in Figs 107, 109—112), fitting in a plank on the top. These planks are 4 in number and form a frame (d<sup>1</sup>, d<sup>2</sup> in Figs 108—112), partly supporting the bottom of the roof. Between the upright poles or planks are pushed down boards (d<sup>3</sup> in Figs 107—110), just as in a Koelawi house of type B. In this way we get low *walls* outside the platforms.

We have two *fireplaces* in the inner gable platforms (Fig. 107). The northern one is placed just east of the middle line of the structure, the southern one west of this line. They are constructed in the usual manner as shallow boxes, supported by heavy bars put crosswise, as can be seen in Fig. 112.

The *roof-truss*. The roof is supported by so great a number of poles and bars that it is almost confusing.

On the top of the inner floor frame there are at each side placed 9 poles (g<sup>2</sup> in Figs 107—109, 111), ending with a tap to fit in a long plank (g<sup>3</sup> in Figs 108, 109, 111), running from one gable to the other. Across these two planks are placed 3 pairs of joists as well as 4 odd joists (g<sup>4</sup> in Figs 108—112). As usual the ones put by pairs are bound to the three main posts of the structure (g, g<sup>1</sup> in Figs 107—

109, 112), the odd one between them is placed right above the plank between the floor and the inner gable platform. Finally there is a joist at each gable.

Beside the 3 main posts the ridge is supported by a *polé* at the gable, raised on the top of the gable joist ( $g^5$  in Figs 109, 112). At the posts as well as at these poles are fastened slender joists in three rows ( $g^6$ ,  $g^7$ ,  $g^8$  in Figs 108—112) at about the same distance from each other.

Close to the three main posts are put big clamps ( $g^9$  in Figs 108, 109, 112), one pair at each post, holding a number of props, meant to add to the solidity of the truss ( $g^{10}$ ,  $h$  in Figs 108, 109, 112).

*The roof* may be said to be double in this lobo also, because there are 9 pairs of rafters resting in the upper plank frame ( $h^1$  in Figs 108, 109, 111), but here they reach the ridge pole as well as the real rafters, only they cross below this pole, while the real rafters meet on the top of it ( $h^2$  in Figs 108—110, 112). The construction of the gables is the usual one, as can be seen in the Figs 109 and 112.

*The roofing* consists of shingles, here not fastened to wooden battens but to thick ratans.

There are two *entrances*, one at each side, not in the middle but near the northern platform (Fig. 107).

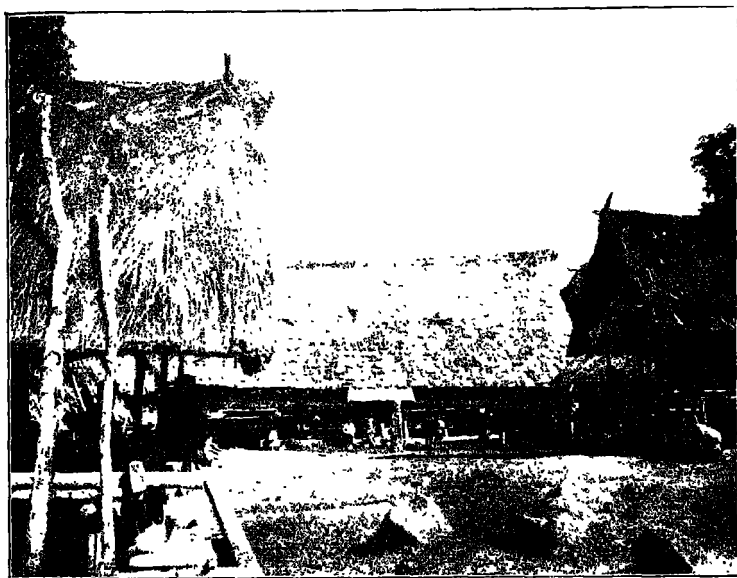
*The staircases* are made of heavy logs, hollowed out. At both sides there are made holes for the sticks which serve as steps (Figs 107, 110).

At the lower end as well as at the top, the log ends in long taps. At the bottom the two taps are like a fork, holding a log, placed on big stones. The two taps at the top are carved in the shape of two heads, the ones at the east side representing those of a man and a woman (Fig. 113 N), the ones of the west side representing horse heads (Fig. 113 M). These carvings are the chief adornments of this lobo.

Beside the heads there were only in the board to the right of the east entrance a pair of conventionalized horns (Fig. 113 L). As adornments may also be classed the conventionalized

animals' heads at the top of the boards which border the roof at the gables (Fig. 109 E). Between these boards there was an odd board, carved in the same manner. From the edge of the roof projected at the gables laths of about the same shape as the odd board on the top of the roof, or they were only pointed at the end.

There were no special *movables* to be seen in this lobo.



W. Kaudern Photo.

Fig. 114. The temple of Kantewoe and the open place in front of it.

## II. The Pipikoro type.

### A. The Kantewoe type.

#### Kantewoe.

I have chosen this lobo as a type, because it was the biggest one and the one most carefully made among the temples which are found in Pipikoro. This lobo (Figs 114, 115) which I measured and represented in 1918 was later pulled down and is at present replaced by another lobo much like the old one but with less ornaments.

The old lobo was situated in the east part of the long stretched village, cutting it into a small eastern part and a bigger western part (Fig. 116). The gables turned toward the north and the south ( $327^{\circ}$ ).

It measured 16,5 m. by 11,5 m., being the biggest temple I have seen in Celebes.

*The foundation* reminds one of that of a Koelawi

house of type B. At the bottom there was a frame of 4 heavy logs in two layers ( $a^1$ ,  $a^2$  in Figs 117, 119, 121, 122, 124, 125). The two near the ground, placed in the longitudinal direction of the structure, rested each on 4 stones, partly driven into the ground. The log of the west side had been damaged in the middle where part of it was missing. The



O. Strandlund Photo.

Fig. 115. The inside of the temple of Kantewoe.

logs of the second layer were not supported by any stones notwithstanding their length.

Outside this frame on a level with the logs at the bottom there was at each gable a heavy log ( $a^3$  in Figs 117, 121, 124, 125), placed on 3 stones, partly buried in the ground.

The frame as well as the logs at the gables carried some short, heavy props, fastened to them by means of taps ( $a^4$  in Figs 117, 119, 121, 122, 124). The upper ends of all these props were more or less forked. The props of the gables



were so adjusted that when a bar ( $a^5$  in Figs 121, 124, 125) was placed in the crotches it was on a level with the crotches of the props of the frame (Fig. 124).

In the lengthwise direction of the lobo there were placed four poles, in the crotches of the props of the frame ( $a^6$  in Figs 119—122, 124). At the gables they were supported by the above mentioned bar ( $a^3$ ), beyond which they projected so much as to be able to carry the gable platforms (Fig. 124). The two poles along the sides were cut into beams (Fig. 119—122).

On the top of these beams and poles there was a layer of 8 big bars as long as the lobo was broad ( $a^7$  in Figs 119, 121, 123—125). Besides there were between the frame and the gable foundation 2 smaller bars on the south side ( $a^8$  in Figs 120, 124, 125) and 3 on the north side, only just covering the four long poles and beams.

On these bars were placed the floor planks as well as several poles and bars.

The floor was made of very broad, coarse planks, placed in the lengthwise direction of the structure, covering 6 bars

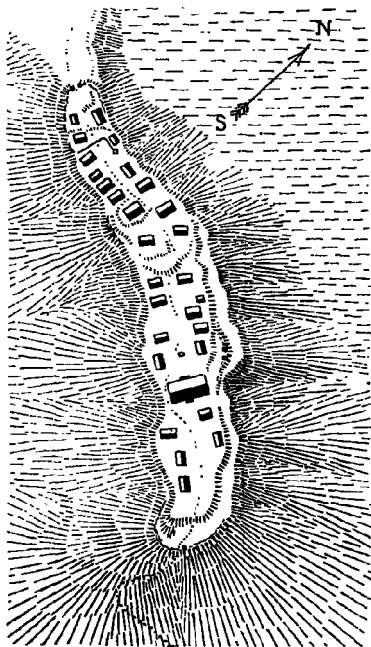


Fig. 116. Plan of the village of Kantewoe.

The horizontal lines to the right indicate wet rice fields (*lida*). The entrances of the village are represented by two points.

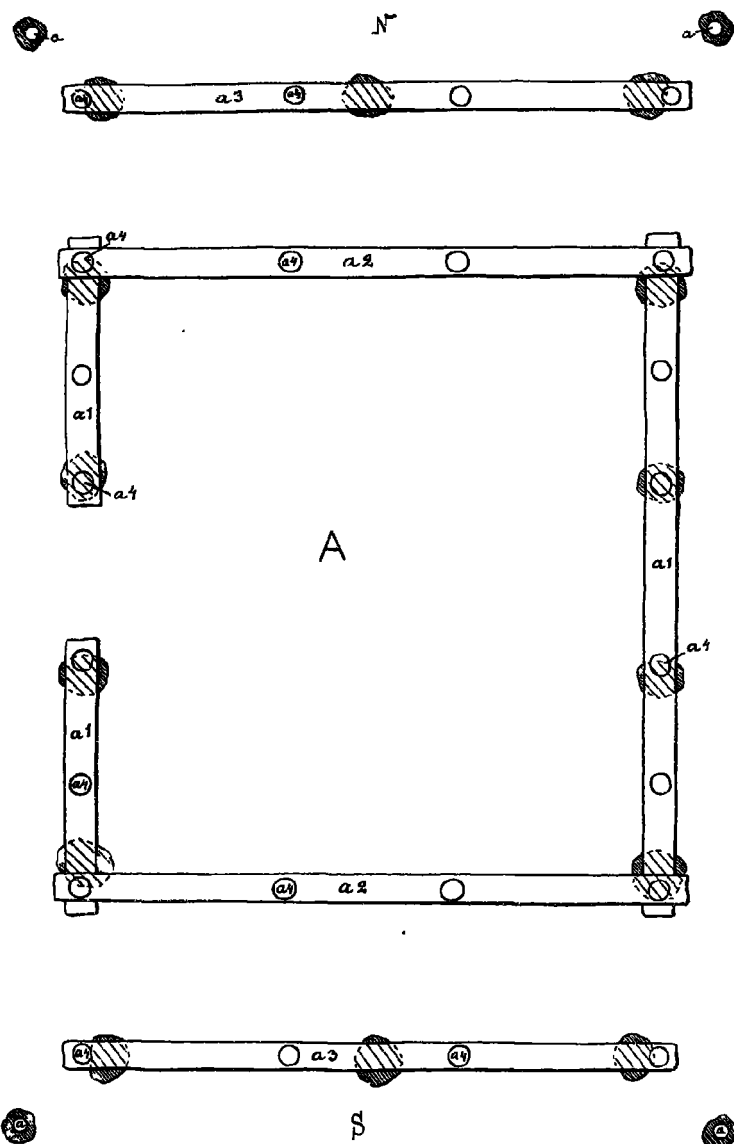


Fig. 117. The temple of Kantewoe.  
a—a': foundation.

1:100.

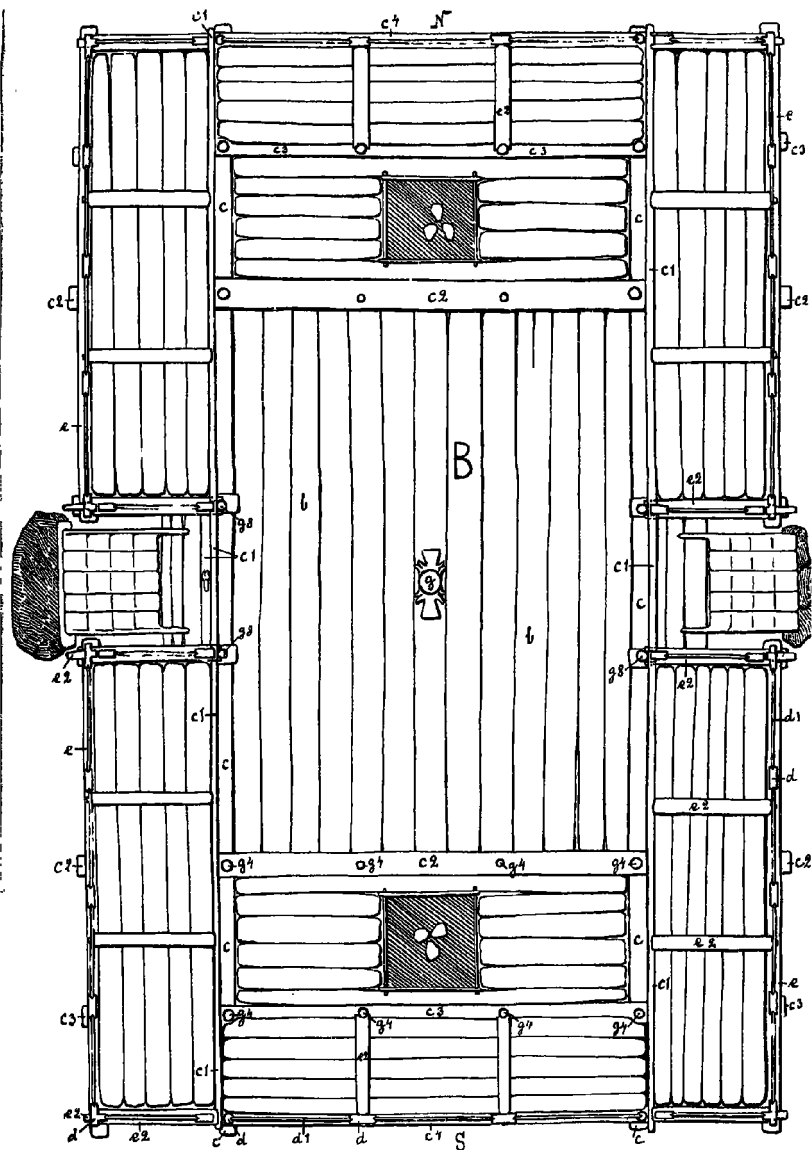
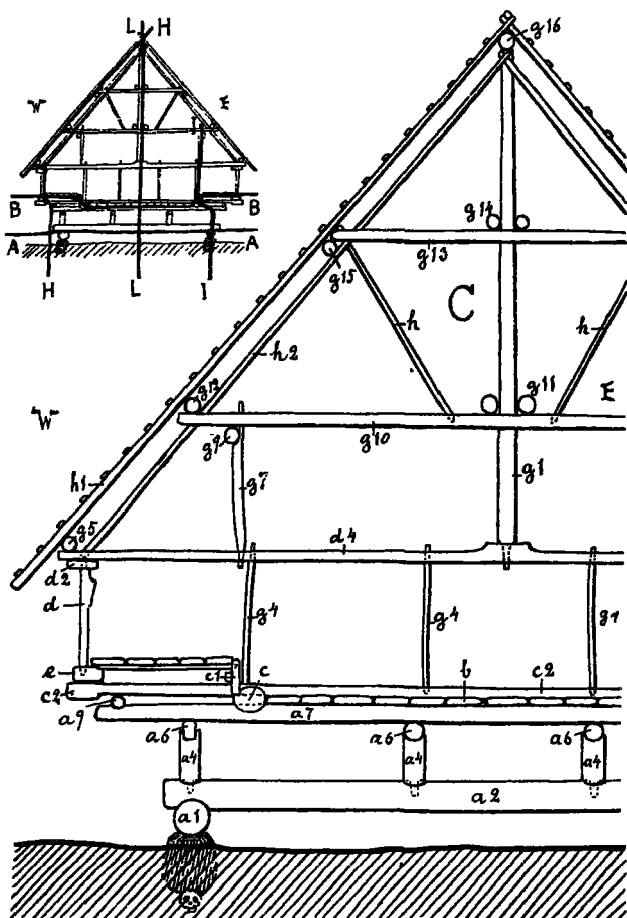


Fig. 118. The temple of Kantewoe.  
 b: floor planks; c—c': floor frame; c': plank between the platforms; c': pole, bordering the gable platform; d, d': walls; e, e': platforms; g, g', g': roof-truss.

of the layer below (b in Figs 118, 119, 122, 124, 125). The plank in the middle of the floor was heavier than the rest,



1:100.

Fig. 119. The temple of Kantewoe.

a<sup>1</sup>—a<sup>6</sup>: foundation; b: floor planks; c—c<sup>2</sup>: floor frame; d, d<sup>2</sup>: walls; e: beam, bordering the platform; g<sup>1</sup>—g<sup>16</sup>: roof-truss; h: slanting props, supporting the rafters; h<sup>1</sup>, h<sup>2</sup>: rafters.

having a swell in its center on which rested the center post of the lobo. This plank had on both sides of the post



the sides as a heavy pole (c in Figs 118—122, 124) and a big plank (c<sup>1</sup> in Figs 118—122, 124), put on edge outside, both

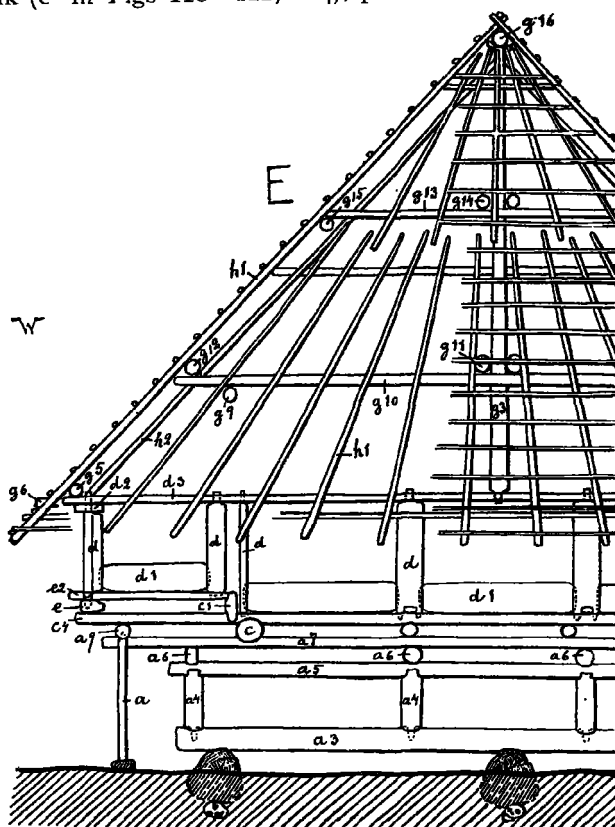
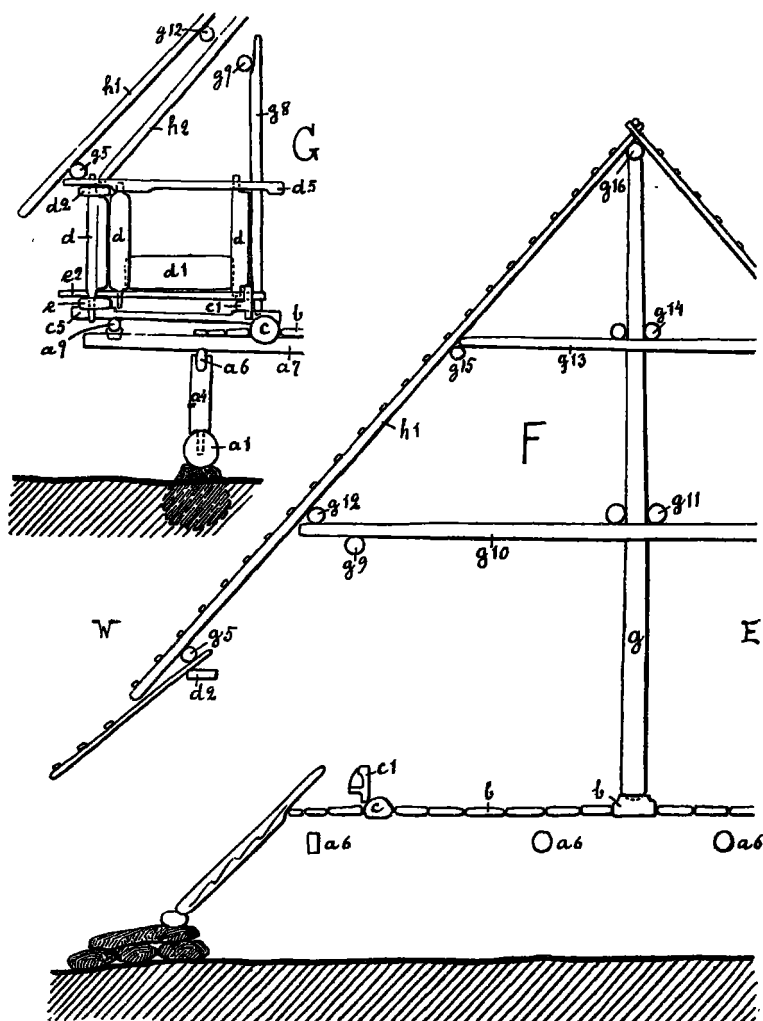


Fig. 121. The temple of Kantewoe.

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a—<sup>a</sup><sub>16</sub>: foundation; c, c<sup>1</sup>: floor frame; c<sup>1</sup>: bar, bordering the gable platform; d—<sup>d</sup><sub>16</sub>: walls; e, e<sup>2</sup>: platforms; g<sup>1</sup>—g<sup>16</sup>: roof truss; h<sup>1</sup>: rafters.

of the same length as the whole lobo. At both ends the floor was bordered by a heavy plank, resting on the top of the floor planks (c<sup>2</sup> in Figs 118, 119, 123—125) as well as on

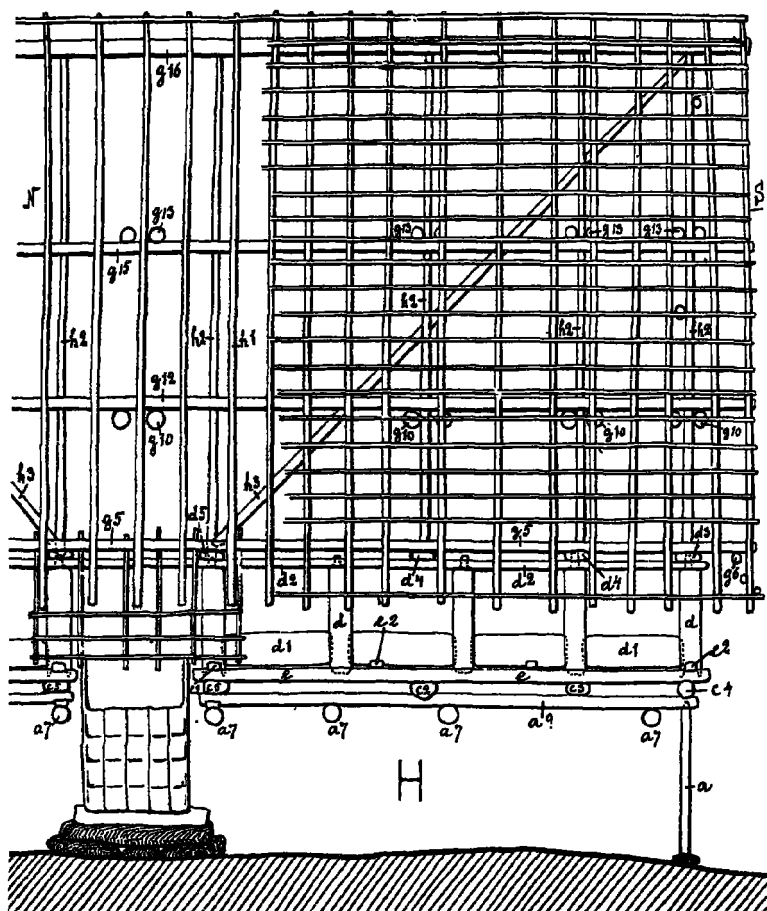


1:100.

Fig. 122. The temple of Kantewoe.

a<sup>1</sup>—a<sup>6</sup>: foundation; b: floor planks; c, c<sup>1</sup>: floor frame; c<sup>5</sup>: short plank, supporting the platform at the entrance; d—d<sup>5</sup>: walls; e, e<sup>2</sup>: platforms; g—g<sup>10</sup>: roof-truss; h<sup>1</sup>, h<sup>2</sup>: rafters.

the poles along the sides of the floor, running from one side of the lobo to the other.



1:100.

Fig. 123. The temple of Kantewoe.

a, a<sup>7</sup>: foundation; c<sup>2</sup>: short side of the floor frame; c<sup>3</sup>: plank between the two gable platforms; c<sup>4</sup>: pole, bordering the outer gable platform; c<sup>5</sup>: short plank, supporting the platform at the entrance; d, d<sup>2</sup>: walls; e, e<sup>2</sup>: platform; g<sup>2</sup>—g<sup>16</sup>: roof-truss; h<sup>1</sup>—h<sup>2</sup>: rafters.

At each gable there was a bar (c<sup>4</sup> in Figs 118, 121, 123—125) of the same length as the just mentioned planks.



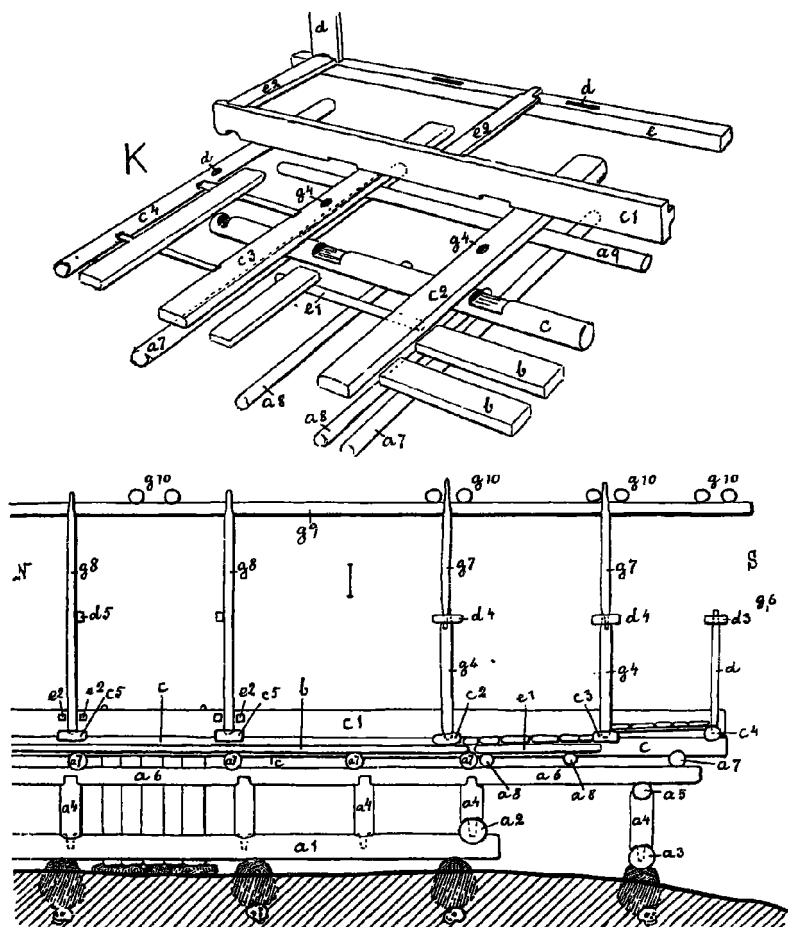


Fig. 124. The temple of Kantewoe.

1:100.

a<sup>1</sup>—a<sup>3</sup>: foundation; b: floor planks; c—c<sup>4</sup>: floor frame; c<sup>1</sup>: plank between the platforms; c<sup>4</sup>: pole, bordering the outer gable platform; e<sup>1</sup>: planks at each side of the entrance; d, d<sup>1</sup>—d<sup>5</sup>: walls; e—, e<sup>2</sup>: platforms; g<sup>1</sup>—g<sup>10</sup>: roof-truss.

Between the bar and the plank ( $c^2$ ) there was another plank ( $c^3$  in Figs 118, 120, 123—125), resting as the gable bar on the heavy pole outside the floor planks.

The platforms resembled those of the Toro lobo, that

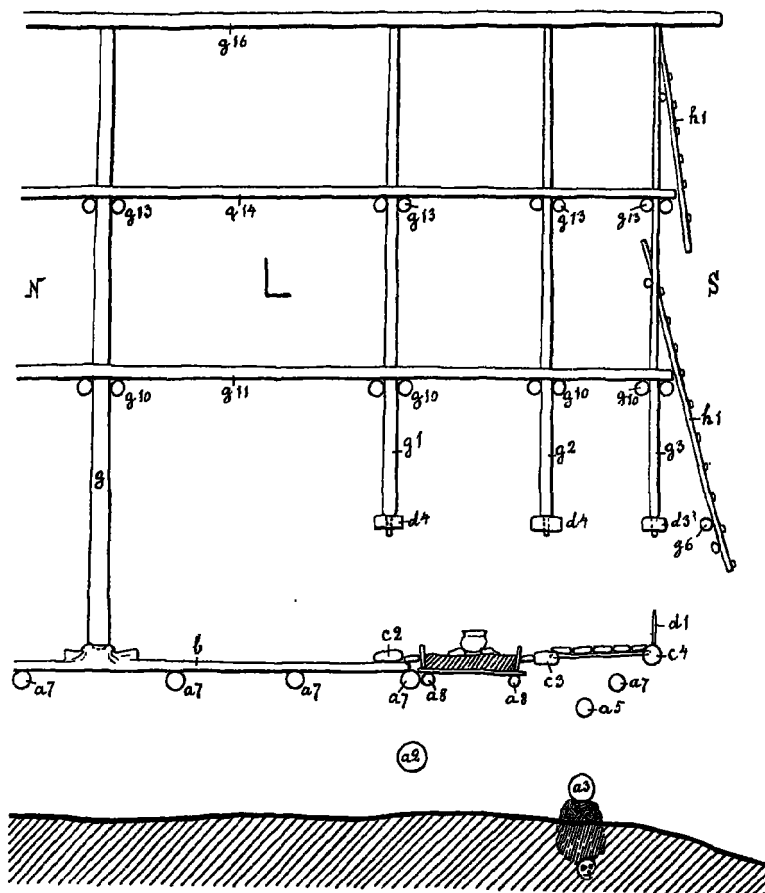


Fig. 125. The temple of Kantewoe.  
 $a^2$ — $a^8$ : foundation;  $b$ : the plank in the middle of the floor;  $c^2$ : floor frame;  
 $c^3$ : plank between the gable platforms;  $c^1$ : pole, bordering the outer gable platform;  $d^1$ — $d^4$ : walls;  $g$ — $g^{16}$ : roof-truss;  $h^1$ : rafters.

is to say there were two platforms at each gable, and the long platforms ran from gable to gable only interrupted by the entrances (Fig. 118).

The flooring was all round of planks, resting on sticks, placed at right angles to the planks. The sticks of the long platforms rested on a list of the plank of the floor frame ( $c^1$ ) as well as on a beam ( $e$  in Figs 119, 120), resting on the planks  $c^2$  and  $c^3$  and the gable pole  $c^4$ . At the staircases this beam ( $e$ ) rests on a short plank ( $c^5$  in Figs 122 G, 123, 124). The planks of the inner platform were placed on sticks ( $e^1$  in Figs 120, 124), resting on the two (or three) small bars ( $a^8$ ) of the layer supporting the floor of the lobo.

In this manner the long platforms would be higher than those of the gables. The inner gable platform was a little higher than the floor, and the outer platform still higher (Fig. 124).

The floor of the long platforms as well as those close to the gables was divided by short planks, placed on the top of the boards, into several compartments ( $e^2$  in Figs 118, 121—124).

There were two *fireplaces* in the middle of the inner short platforms, constructed in the usual manner, resting on the same bars as the sticks which carried the floor of the platform ( $a^8$  in Figs 120, 125).

*The walls* ( $d$ — $d^5$  in Figs 118—125) round the platforms were made in the same manner as in the lobo of Toro. As we see in Figs 118 and 122 G there are as well walls on each side of the entrances.

*The roof-truss.* On the top of the plank frame, ( $d^2$ ,  $d^3$  in Figs 119—125) which kept the upper ends of the wall planks, were placed 4 planks, two at each gable ( $d^4$  in Figs 119, 120, 123—125) right above the planks which separate the lobo floor from the inner platform and this platform from the outer platform. These 4 planks were each supported by 4 props ( $g^4$  in Figs 118—120, 124), fitting in holes in the just mentioned planks below ( $c^2$  and  $c^3$ ). At

the end of the four planks there is at each side of the lobo a long bar, running from one gable to the other ( $g^5$  in Figs 119—123), the ends joined by a bar at the gables ( $g^6$  in Figs 121, 123—125).

In the center of the gable plank ( $d^3$ ) of the wall frame as well as in the two planks inside ( $d^4$ ) there was a hole for the taps of the high poles ( $g^1$ ,  $g^2$ ,  $g^3$  in Figs 119—121, 125) which together with the post in the center ( $g$ ) of the structure supported the pole of the ridge. Thus, in this lobo there was only one ridge post resting on the floor.

Each of the two planks near the gable carried as well 2 props ( $g^7$  in Figs 119, 120, 124), fitting with a tap in the plank.

At each side of the entrance there was a rather high pole ( $g^8$  in Figs 118, 122, 124). At the upper end of these poles as well as at the props ( $g^7$ ) just mentioned was bound a long bar ( $g^9$  in Figs 119—122, 124), running from one gable to the other, forming the support of 7 pairs of heavy bars, serving as joists ( $g^{10}$  in Figs 119—125), each pair fastened to the 7 poles which carried the ridge.

Across these joists were placed 4 long bars, two in the middle ( $g^{11}$  in Figs 119—122, 125), close to the ridge posts, two at the ends ( $g^{12}$  in Figs 119—123). The same arrangement of 7 pairs of joists, crossed by 4 long bars was repeated higher up ( $g^{13}$ ,  $g^{14}$ ,  $g^{15}$  in Figs 119—125). The only difference was that the two side bars of the second row were fastened below the joists instead of on the top of them as in the bottom row.

In order to increase the stability of the roof, there were at each side 4 props, supported by the joists ( $h$  in Figs 119, 120).

*The roof.* The rafters ( $h^1$ ) were fastened to the ridge pole ( $g^{16}$  in Figs 119—123, 125) as well as to the long bars at the end of the joists ( $g^5$ ,  $g^{12}$ ,  $g^{15}$  in Figs 119—123). Beside these rafters, which were joined by a great number of battens to support the shingles, there were 8 pairs of

rafters ( $h^2$  in Figs 119—123) fastened inside the long bars. Finally the roof was strengthened by 4 long slanting bars, two at each side ( $h^3$  in Figs 123).

The gables were made in the usual manner in two stories with an opening between (Figs 121, 125.).

At each entrance there was a small roof built out from the edge of the big roof. The construction is very simple and can be followed in Figs 122 and 123.

The walls at each side of the entrances were finished by a short plank ( $d^5$ , in Figs 122 G, 123, 124).

*The roofing* was the usual one of big shingles.

The two *entrances* were in the middle of the two sides (Fig. 118).

*The staircases* were made of 5 short, heavy planks in which steps were hewn out. The top of the outer ones finished in a short railing (Figs 118, 123). The staircase rested on big stones and leaned against a little landing, consisting of two or three short planks on a level with the floor (Figs 118, 122).

*Adornment.* In this lobo several shingles were carved not only at the bottom as usual but also at the top (Fig. 170: <sup>30</sup>—<sup>33</sup>). Besides there were carvings in relief on the outside of the wall planks of the platforms as well as inside the upright planks of the walls, the former on the gables, the latter chiefly on the sides.

The three carvings at the gables are represented in Figs 126 A, B, C. Fig. 126 B from the north gable is meant to represent a man, the other two from the southern gable are a pig and a monkey.

The subjects of the carvings inside the lobo were either the buffalo head alone or in bizarre combinations with the human genitals.

Of the 15 carvings I have only represented 8, since the rest were almost the same as these and besides very simple. There were for instance several like Fig. 127 D.

Beside these carvings I found on the outer plank of

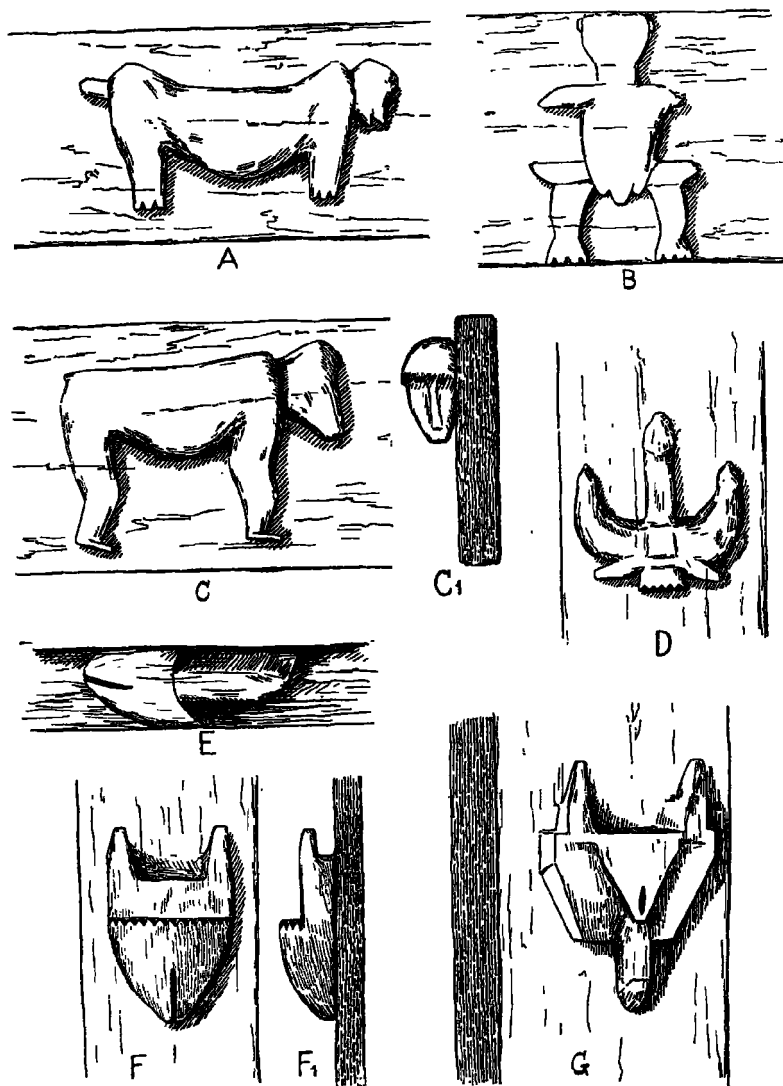
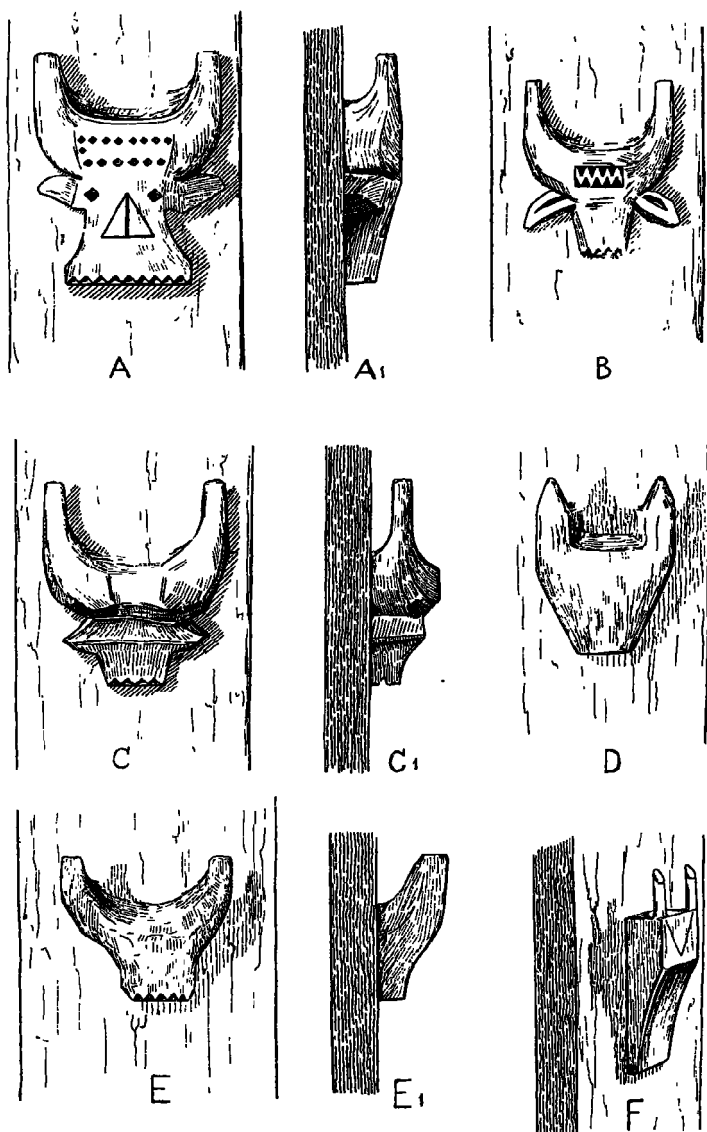


Fig. 126.

Wood carvings from the temple of Kantewoo. A and C on the wall planks of the southern gable; B on the north gable; E on the floor frame; at the western entrance; D, F, G inside the upright wall planks. A: a pig; B: a man, C: a monkey D, E, F, G phallus figures.



1:10.

Fig. 127.

Wood carvings on the upright wall planks inside the temple of Kantewoc.

the floor frame near the western entrance a carving representing a vulva and a penis (Fig. 126 E, 118).

There were no *movables* in the lobo. The drums which belonged to it were kept in the house of the *kapala* (chief of the village) and only brought to the lobo in case of feasts. The missionary of Kantewoe, Mr. Woodward who was present when this lobo was pulled down told me when I met him in Holland in 1924 that there was a human skull underneath every stone of the foundation.





W. Kaudern Photo.

Fig. 128.

The temple of Peana. The house to the right behind the temple is the bentaja.

### Peana.

The lobo of Peana is situated almost in the middle of the village with the gables nearly toward the north and the south ( $345^{\circ}$ ).

It measures 14,5 m. by 10,5 m.

The whole lobo is built quite in the same manner as the Kantewoe lobo, although of smaller dimensions. The long platforms however have here the same depth as in the Kantewoe lobo (2,15 m.). The inner gable platforms measure 2,25 m. (Kantewoe 2,35m), the outer ones 1,5 m. (Kantewoe 1,75 m.).

There are in this lobo carvings on the walls of the platforms as well as shingles carved in the usual manner. These carvings however are not so numerous as in the lobo of Kantewoe, but instead they are more carefully

made. The subjects of the carvings are on the whole the same in both temples. At Peana however I found a conventionalized carving representing the head of an Anoa

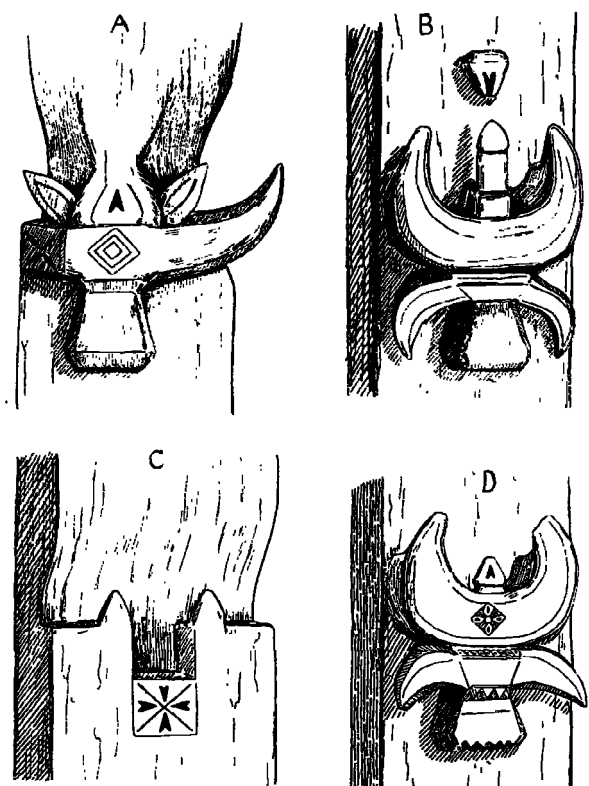


Fig. 129.

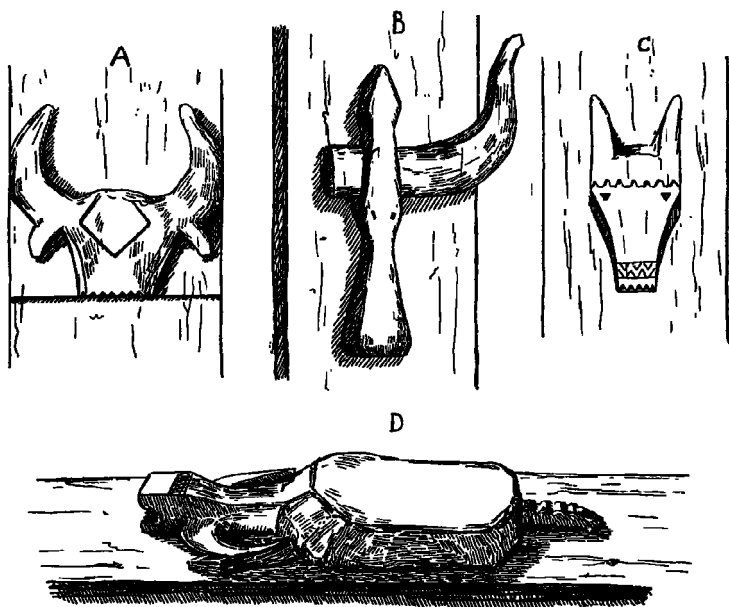
A—C 1:10; D 1:20

Wood carvings in the temple of Peana.

(Fig. 130 C). All these carvings were found on the upright wall planks.

In a plank just outside the floor frame was carved a

whole buffalo, seen from above (Fig. 130 D). This plank originally belonged to an old lobo which had been pulled down. It was the central part of the plank that supported the



A—C 1:10 D 1:20.

Fig. 130.

Wood carvings in the temple of Peana.

center post of the lobo. In the present center plank were at each side of the post carved a buffalo's head like those in the Kantewoe lobo.



W. Kaudern Photo.

Fig. 131.

The village of Benahoe. The house a little to the left with a shingle roof is the temple.

## Benahoe.

The lobo of Benahoe is situated almost in the north corner of the village. There are only a couple of houses north of it at some distance from the road. The gables nearly turn toward the north and the south ( $15^{\circ}$ ).

As to the dimensions of the structure they approach those of the two previous lobos, being 15 m. by 9,5 m.

The construction is the same as that of the lobos of Peana and Kantewoe. Only the roof is here not quite so high as can be seen in the representation on the top of the page. We also notice, that the poles which support the ridge, at the gables pierce the upper part of the roofing.

In this lobo there are a number of carvings much like the ones found in the other two lobos. As we see in Figs 133 and 134 there is however a certain difference of subjects as well as of the manner of giving shape to them.

At the south gable, four of the five horizontal wall



W. Kaudern Photo.

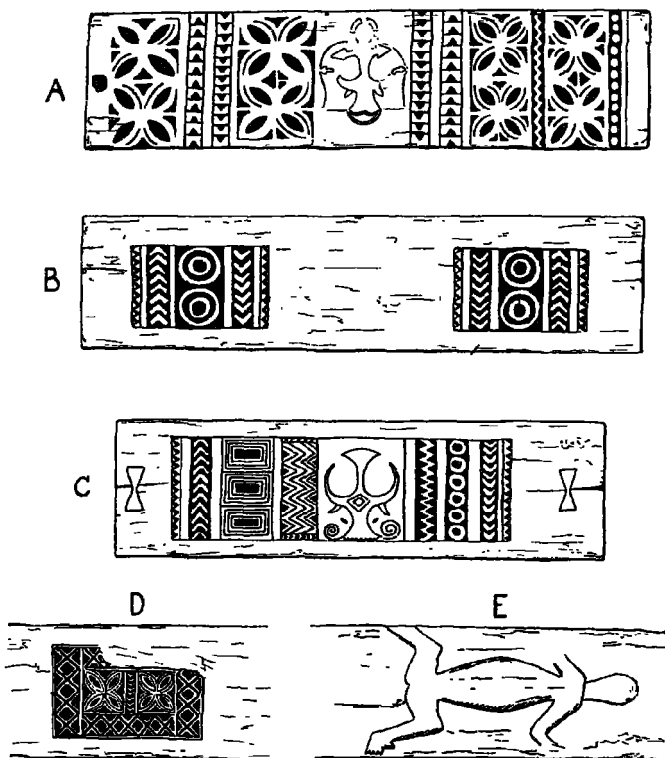
Fig. 132.

Benahoe. Natives in front of the temple. The European to the left is the missionary, Mr. Woodward. Close to him stands an old woman suffering from struma, a very common affection among the women in the highlands.

boards are carved (Fig. 133 A—D). The subjects of these carvings are chiefly geometric figures. In the center of two boards there is however a buffalo's head, one of them with a man's head at the top, surrounded by a kind of aureola, possibly an imitation of a Buddha's head (Fig. 133 A).

On the left hand of the western entrance there is a board, carved in the shape of a monkey (Fig. 133 E).

Some of the upright wall planks are carved inside, others outside. The most important carvings are reproduced in Fig. 134. Among these carvings I find the one repre-

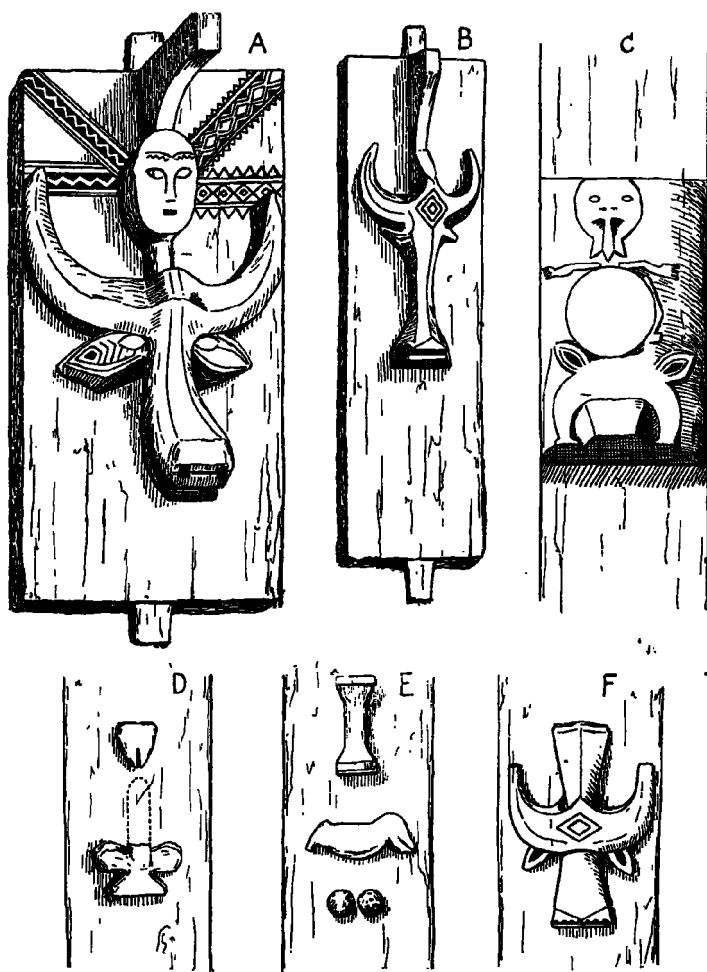


1:10.

Fig. 133. Wood carvings in the temple of Benahoe.

senting a buffalo's head with a man's head on the top (Fig. 134 A) remarkable because of the rays round the head, resembling an aureola.

Finally there was a carving round the center post (Fig.



1:10.

Fig. 134. Wood carvings from the temple of Benahoe. A, B, D—F on the outside of upright wall planks; C: on the plank in the middle of the floor round the main post of the temple.

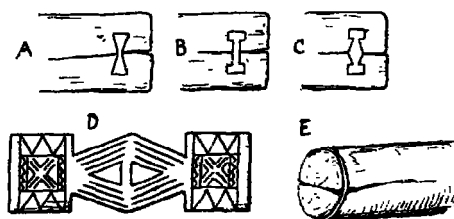


Fig. 135. Native method of repairing planks and logs that have burst.  
From the Benahoe temple.

134 C) representing a strange combination of a man's head and a buffalo's head with two ears.

In Fig. 135 we see the native method of repairing planks and logs that have burst. D is the carved end of the plug C.



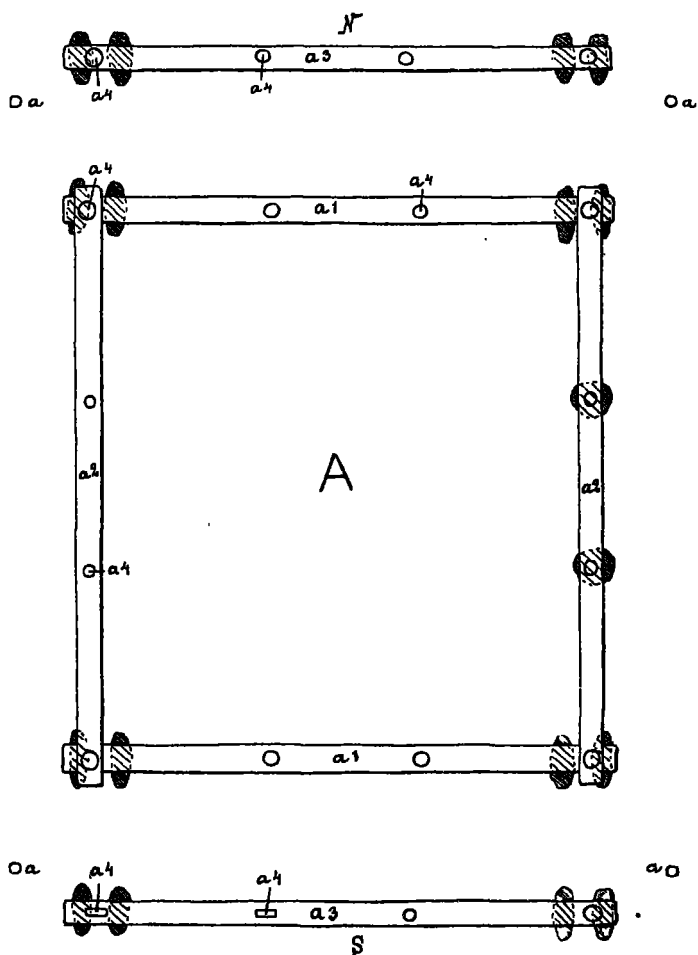


Fig. 136. The temple of Bolapapoe.  
a—a<sup>4</sup>: foundation.

1:100.

### Bolapapoe.

We find this lobo almost in the middle of the village, a little to the west. According to the natives the gables turned toward the north and the south, but when I con-

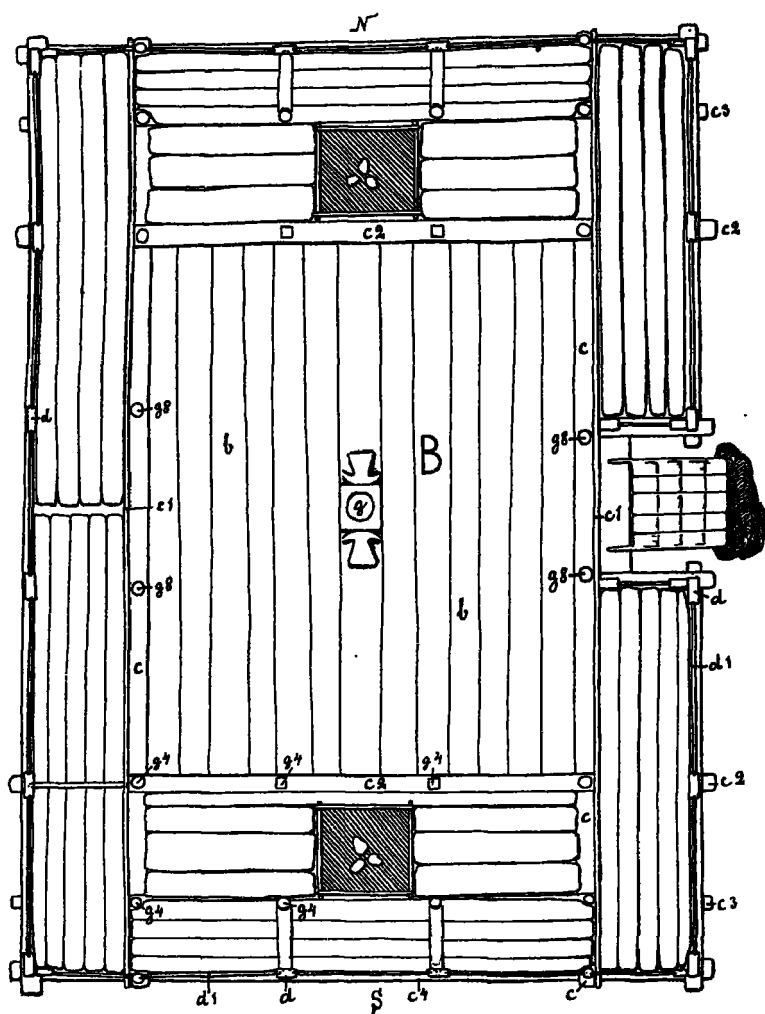


Fig. 137. The temple of Bolapapoe.

b: floor planks; c—c<sup>2</sup>: floor frame; e<sup>2</sup>: plank between the gable platforms; c<sup>1</sup>: pole, bordering the outer gable platform; d, d<sup>1</sup>: walls; g, g<sup>1</sup>, g<sup>2</sup>: roof-truss.

sulted the compass, I found a difference of 30° toward the east.

It measures 12,5 m. by 9 m.

The construction is quite the same as that of the Kantewoe lobo with some small inessential differences, owing to the fact that some details are less complicated here.

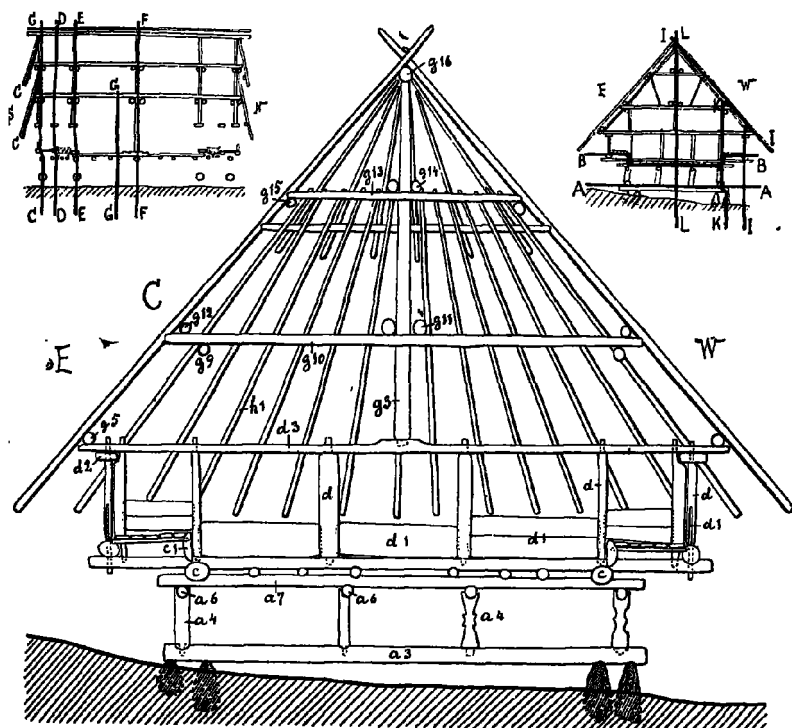


Fig. 138. The temple of Bolapapoe. 1:100.  
a<sup>3</sup>—a<sup>7</sup>: foundation; c, c<sup>1</sup>: floor frame; d—d<sup>7</sup>: walls; g<sup>3</sup>—g<sup>16</sup>: roof-truss; h<sup>1</sup>: rafters. The miniature drawings show the place of the sections A—L.

It has for instance only one entrance, situated at the east side of the temple.

The wood carvings of this lobo are of the same kind as in the three previous lobos, but they are not so numerous and only a few of them made with care (Fig. 144 N—S).

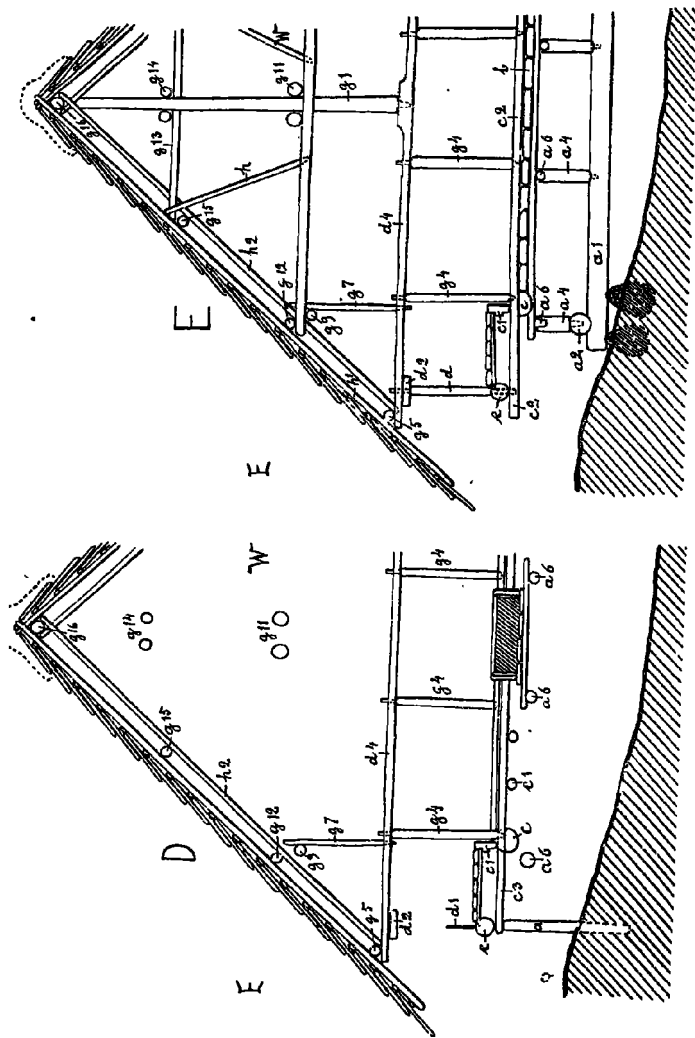


Fig. 139. The temple of Bolapapoc.  
 a— $a'$ : foundation; b: floor planks; c— $c'$ : floor frame;  $d$ — $d'$ : plank between the two gable platforms; d— $d'$ : walls; e: pole  
 bordering the side platform;  $f$ — $f'$ : slanting props, supporting the rafters;  $h$ ,  $h'$ : rafters

1:100.

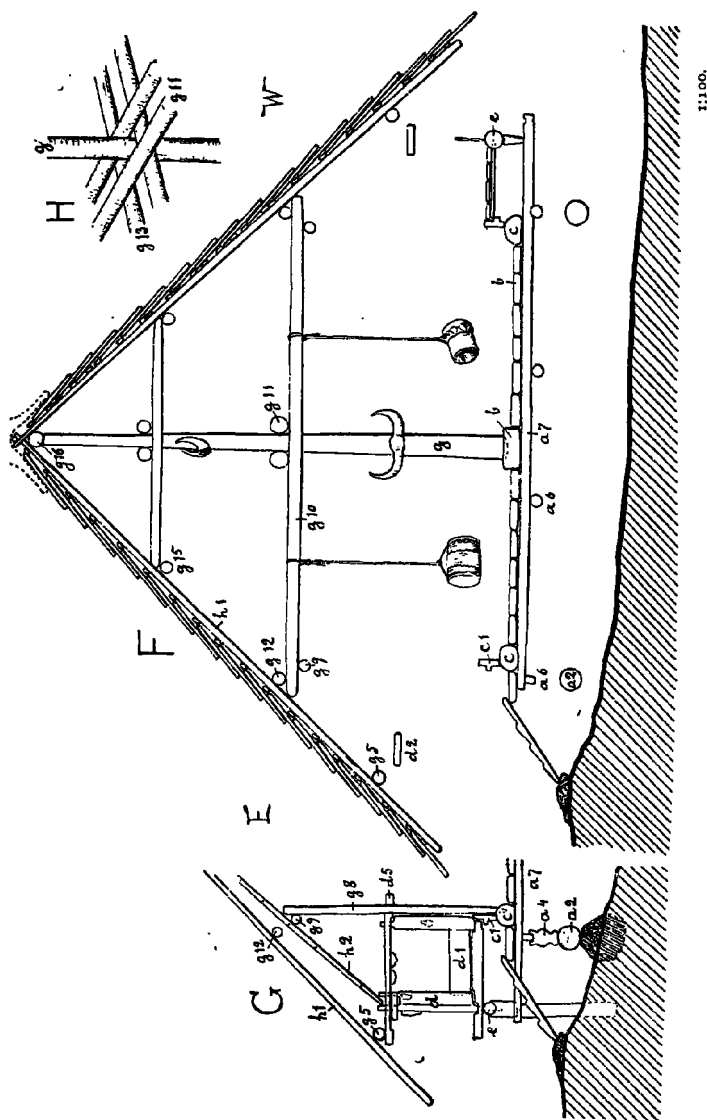


Fig. 140. The temple of Bolapapoe.

a<sup>1</sup>—a<sup>7</sup>: foundation; h: floor planks; c, c': floor frame; d—d': walls; e: pole, bordering the side platform;  
 g—g<sup>15</sup>: roof truss; h<sup>1</sup>, h<sup>2</sup>: rafters.

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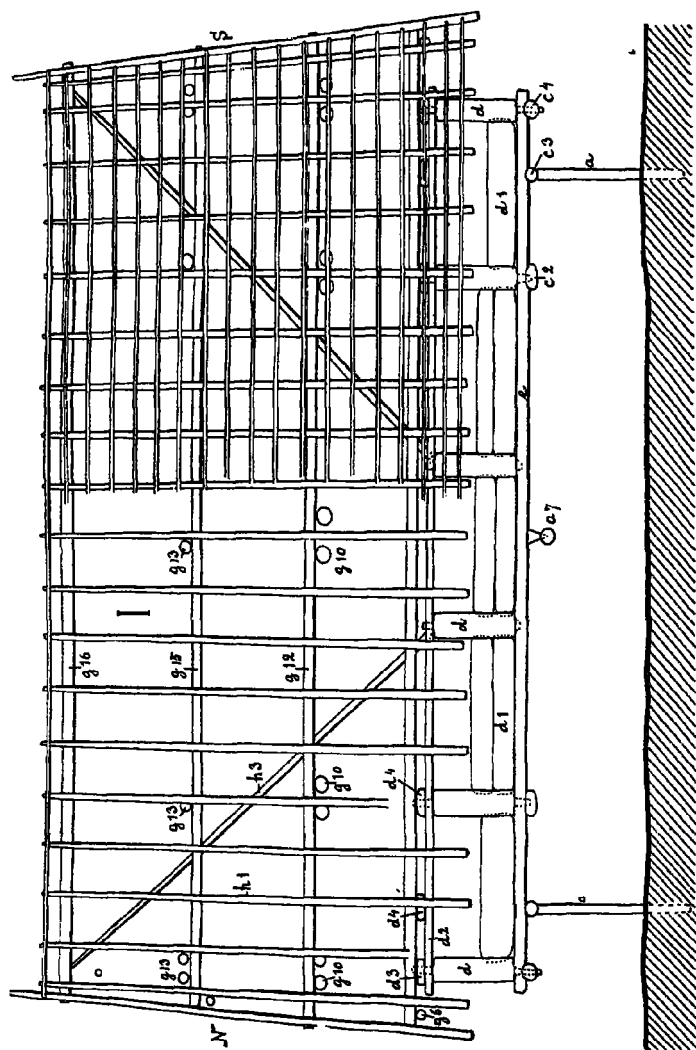
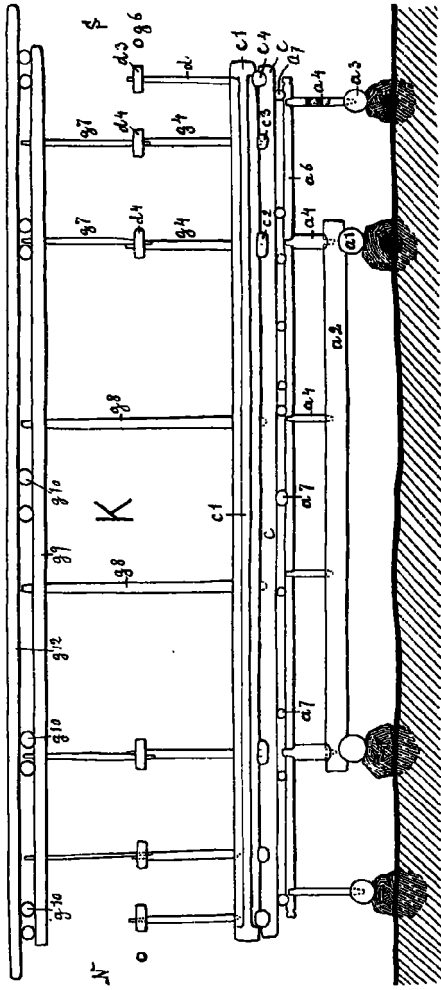


Fig. 141. The temple of Bolapapoe.

a, a': foundation; c': floor frame; c': pole between the two gable platforms; c': pole, bordering the outer gable platform; (1—1': walls; e: pole, bordering the side platform; g<sup>e</sup>—g<sup>16</sup>: roof-truss, h<sup>1</sup>, h<sup>2</sup>: rafters;

1100.



1:100.

Fig. 142. The temple of Bolapapoc.  
 a<sup>1</sup>—a<sup>7</sup>: foundation; c—c<sup>2</sup>: floor frame; c<sup>3</sup>: pole between the two gable platforms; c<sup>4</sup>: pole, bordering the  
 outer gable platform; d—d<sup>4</sup>: walls; g<sup>1</sup>—g<sup>10</sup>: roof-truss.

These are found at the east side on some wall boards to the right of the entrance (Fig. 144 R, S). Here I also noticed two semispheres, shaped like a woman's breasts.

Inside the lobo there are only a few carvings on the

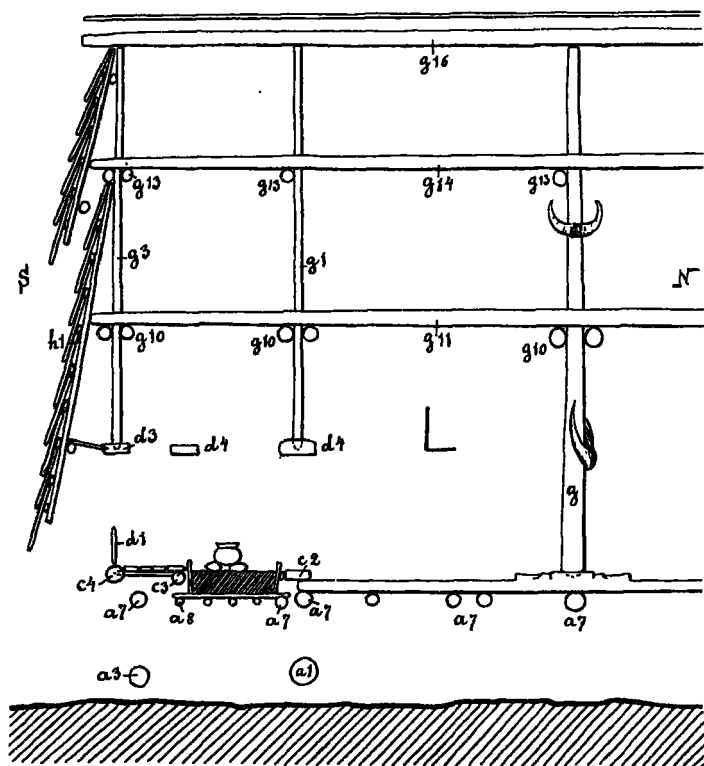
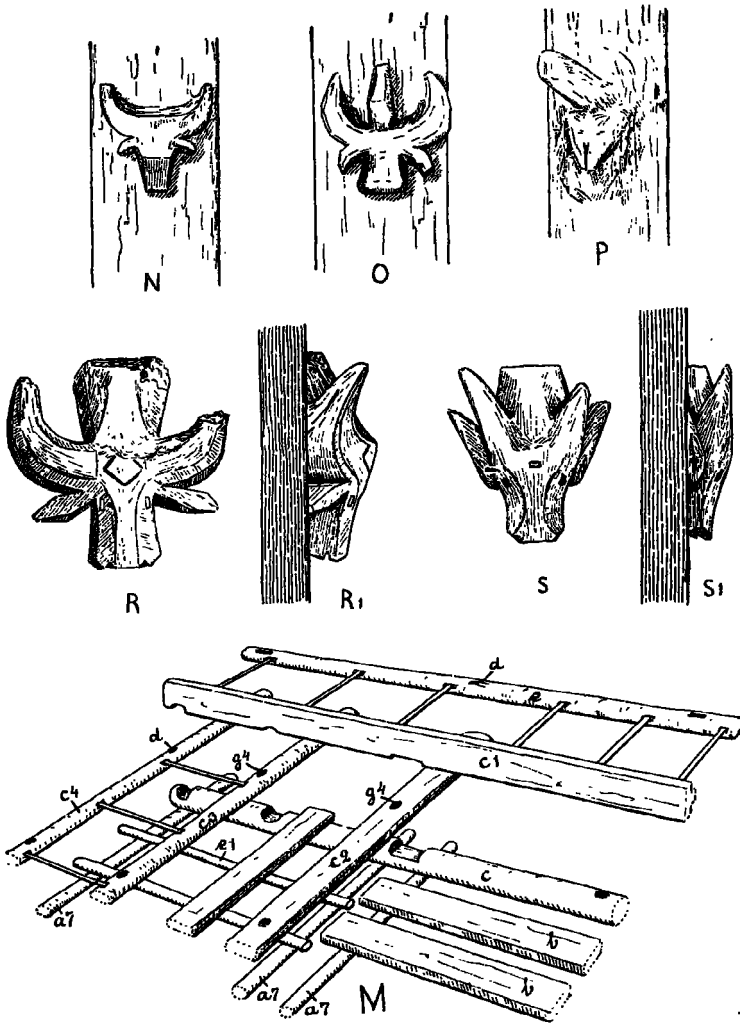


Fig. 143. The temple of Bolapapoe.

a<sup>1</sup>—a<sup>7</sup>: foundation; c<sup>1</sup>: floor frame; c<sup>3</sup>: pole between the two gable platforms; c<sup>4</sup>: pole bordering the outer gable platform; d<sup>1</sup>—d<sup>4</sup>: walls; g—g<sup>16</sup>: roof-truss; h<sup>1</sup>: rafters.

upright wall planks (Fig. 144 N, O). On the left hand of the entrance there is another specimen of a woman's breasts on the top plank of the platform (Fig. 140 G) as well as a combination of the vulva and the penis on one of the up-





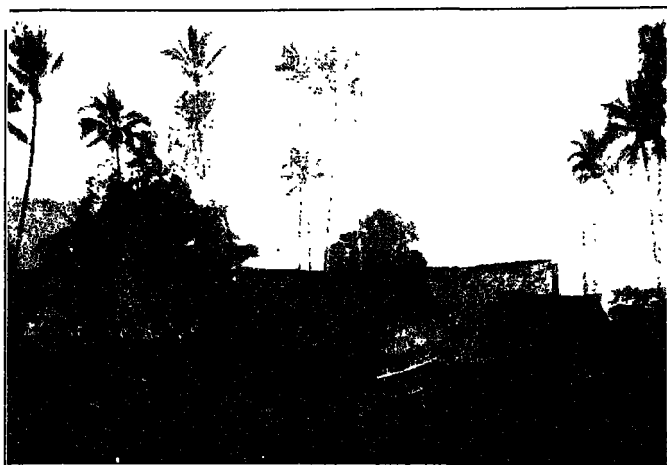
N—S 1:10.

Fig. 144. The temple of Bolapapoe.

M one corner of the structure; N—S wood carvings. a<sup>1</sup>: foundation; b: floor planks; c—c<sup>2</sup>: floor frame; c<sup>3</sup>: pole between the two gable platforms; c<sup>4</sup>: pole, bordering the outer gable platform; d: holes, keeping the poles of the walls; e: pole, bordering the side platforms; e<sup>1</sup>: sticks, supporting the flooring of the inner gable platform; N, O, carvings on the inside of two upright wall planks; P: at the entrance; R, S: on a long wall plank to the left of the entrance.

right wall planks (Fig. 144 P). Besides, two or three prominent branches are carved in the shape of a penis.

*Movables.* At the center post were tied two pairs of buffalo horns. As a rule two or three drums were kept in the lobo, but sometimes they were brought to the house of the former chief of the head hunters.



W. Kaudern Photo.

Fig. 145. The village of Poraclea in Tole. The house in the background to the left is the temple.

## B. The Tole type.

### Poraelea.

In the district of Tole there were still in 1918 two rather big lobos although in bad condition, one at Poraelea, one at Pangana. The construction resembles in some respects that of the Kantewoe type, but still the difference is so great, that this lobo must be considered as representing another type of structure. The lobo of Poraelea which I carefully measured and examined, will be described as an example of the Tole type.

How it is situated is seen in Fig. 146.

The gables were supposed to turn toward the north and the south but deviated  $33^\circ$ .

It measures 10 m. by 8,5 m.

The foundation is rather simple, consisting only of a number of logs, placed in layers. At the bottom there

are 2 logs ( $a^1$  in Figs 147—150, 154) put in the longitudinal direction of the lobo, each resting on three stones, partly buried in the ground. In the second layer there are 3 logs ( $a^2$  in Figs 147, 148, 150, 154), the one in the middle supported by a big, pointed stone. The 3:rd layer contains 4 long, heavy poles, running almost from one gable to the other ( $a^3$  in Figs 148—151, 154).

On the top of these poles is a layer of 8 heavy bars ( $a^4$  in Figs 149, 151, 153, 154), carrying the floor, the floor frame, the fireplaces as well as two bars, one at each side of the entrance ( $a^5$  in Figs 149—153). On these bars are placed a number of short props ( $a^6$  in Figs 149, 152, 153), joined at their top by another bar ( $e$  in Figs 147, 149—153) forming, the border of the side platforms.

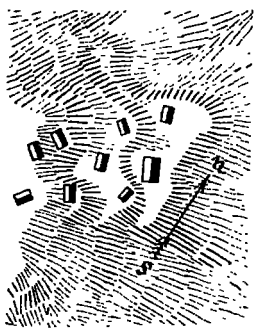


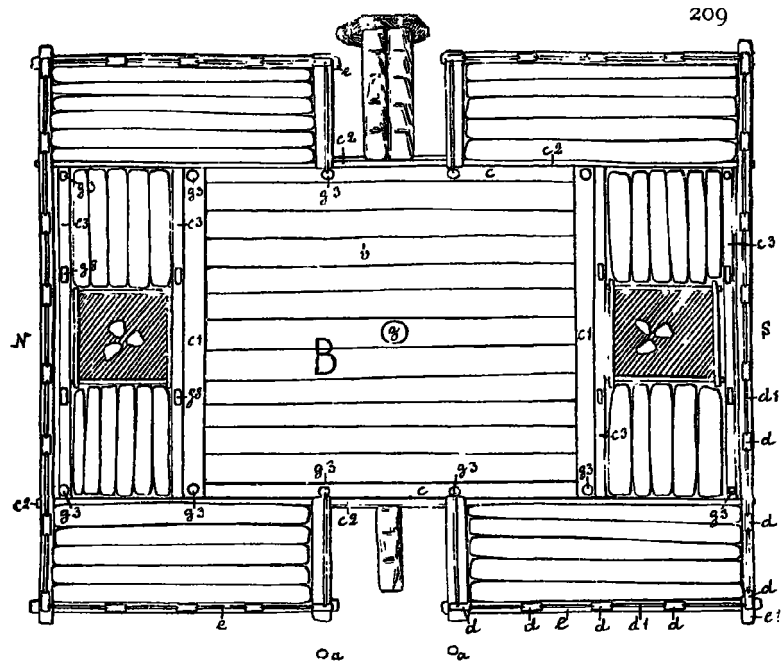
Fig. 146  
Plan of the village of  
Poraclea in Tole.

The floor is made of heavy planks, running in the longitudinal direction of the structure ( $b$  in Figs 147—150, 154). The one in the middle is broader than the rest. In its center is a swell on which rests

the main post of the lobo.

*The floor frame.* Just outside the floor planks there is at each long side a heavy plank, running from one gable to the other ( $c$  in Figs 147—152, 154). At the end of the floor another plank ( $c^1$  in Figs 147, 150, 154) is placed on the top of the floor planks, its ends resting on the long side-planks, thus forming together with the long planks a frame round the floor.

Then there is a second frame, consisting of 6 planks put on edge, two long ones ( $c^2$  in Figs 147—152, 154) on the top of the long planks of the floor frame, two outside the planks on the top of the floor ( $c^3$  in Figs 147, 150, 151, 154).



A

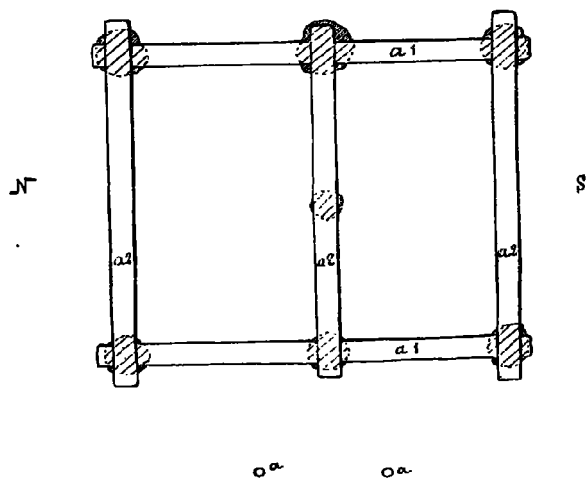


Fig. 147. The temple of Poraelca.

a— $a^2$ : foundation; b: floor planks; c— $c^2$ : floor frame; d,  $d^1$ : walls; e,  $e^1$ : frame round the platforms; g,  $g^2$ ,  $g^3$ : roof-truss.

1:100.

This frame will thus make three enclosures or compartments, one bigger in the middle of the structure (= the floor) and one at each gable, surrounding the gable

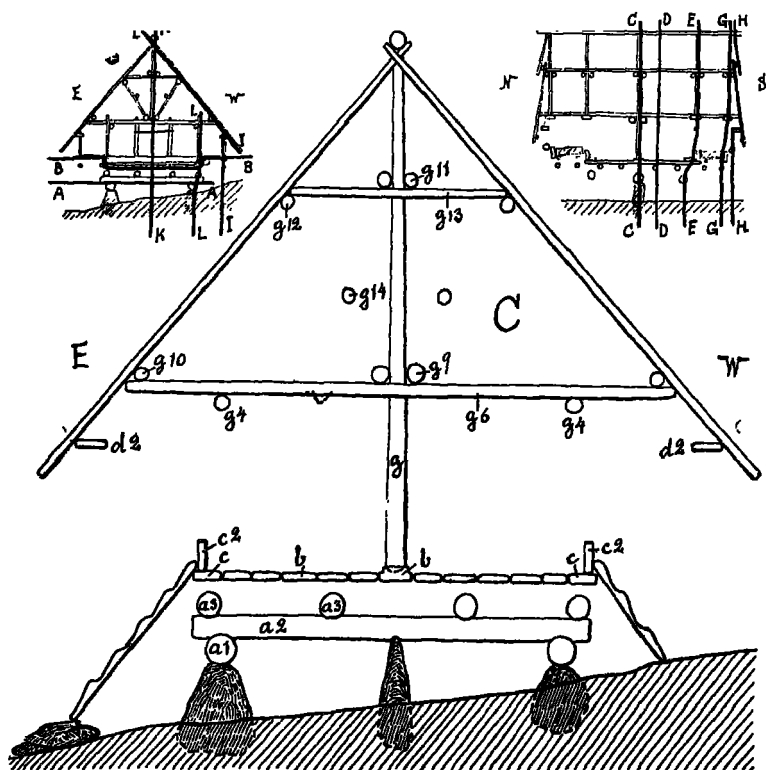


Fig. 148. The temple of Poraelea.

1:100.

a<sup>1</sup>—a<sup>3</sup>: foundation; b: floor planks; c, c<sup>2</sup>: floor frame; d<sup>2</sup>: upper frame round the platforms; g—g<sup>14</sup>: roof-truss. The miniature drawings show the place of the sections A—L.

platforms. How these planks are joined can be seen in Fig. 150 F.

*The platforms* are on a level all round the lobo. Here there are not two platforms at each gable but only one. The floor is made of planks, resting on sticks. In the gable

platforms these sticks fit in between the planks of the second floor frame. At the side platforms they rest in small notches in the long planks of that same frame and

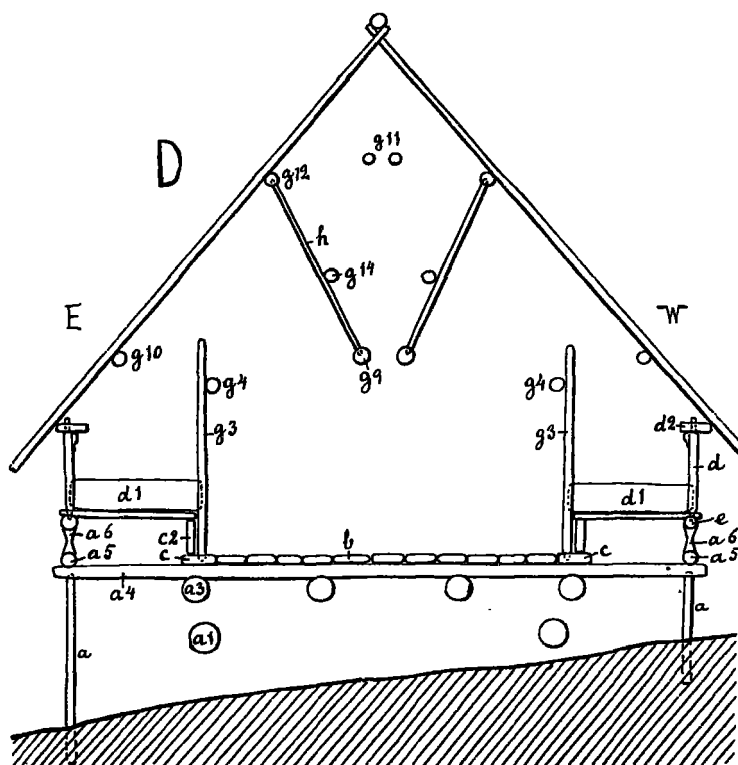


Fig. 149. The temple of Poraelea.

a— $a^6$ : foundation; b: floor planks; c,  $c^2$ : floor frame round the platforms; d— $d^2$ : walls;  $g^3$ — $g^{14}$ : roof-truss; h: slanting props, supporting the rafters.

in notches in the bars outside the platforms (e in Figs 147, 149—153).

These bars are joined by a bar at each gable ( $e^1$  in Figs 147, 152—154), placed just outside the planks, belonging to the floor frame. In this way we get a frame





At each side of the entrance the wall only holds one plank ( $d^1$  in Fig. 149).

There were two *fireplaces*, almost fallen into pieces. I had some difficulty in making a reconstruction, but I

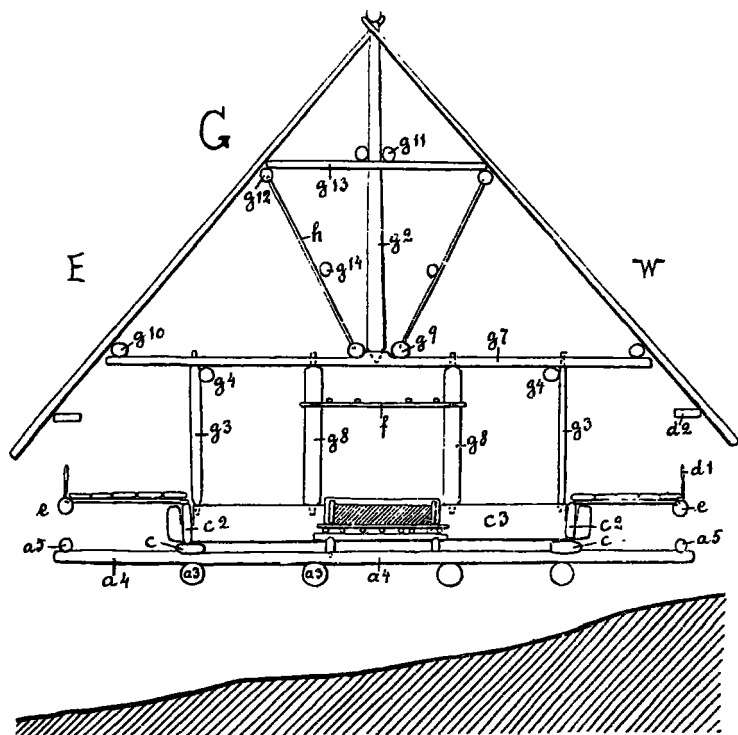


Fig. 151. The temple of Poraelea.

$a^3$ — $a^5$ : foundation;  $c$ — $c^3$ : floor frame;  $d^1$ ,  $d^2$ : walls;  $e$ : lower frame round the platforms;  $f$ : grate above the fireplace;  $g^2$ — $g^{11}$ : roof-truss;  $h$ : slanting props.

think my representation is correct. There were the usual sticks resting on a foundation which was not quite made in the usual manner as can be seen in Figs 151 and 154 K.

The *roof-truss* resembles on the whole that of the Kantewoe lobo. Inside the long platforms stand at each side

6 rather high poles ( $g^3$  in Figs 147, 149—151, 154); the two in the middle are placed one at each side of the entrance on the inner floor frame, the next two on the top of the plank at the end of the floor, and the remaining two on

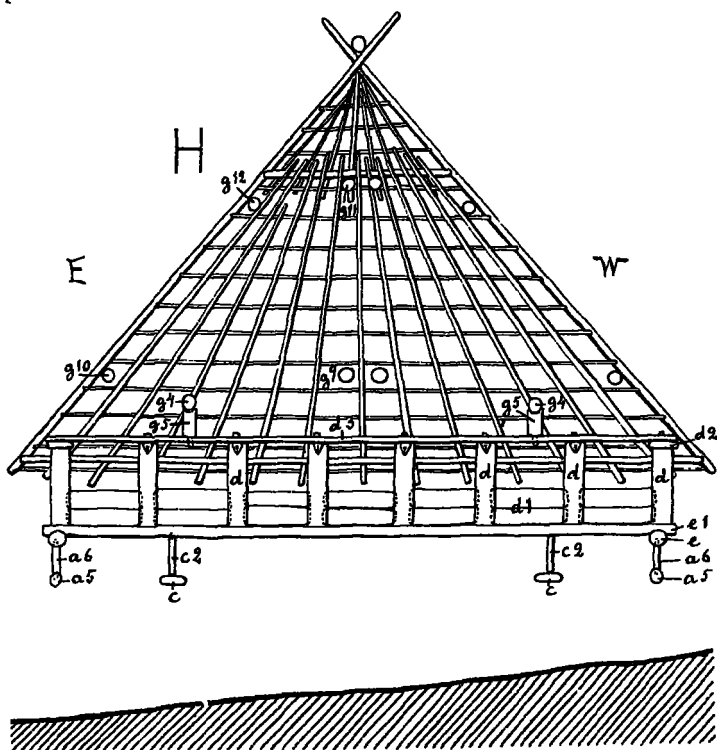


Fig. 152. The temple of Poraelea.

$a^5$ ,  $a^6$ : foundation;  $c$ ,  $c^2$ : floor frame;  $d$ — $d^3$ : walls;  $e$ ,  $e^1$ : lower frame round the platforms;  $g^1$ — $g^{12}$ : roof-truss.

the gable plank of the outer floor frame. Inside these poles, near the top, is bound a long bar, running from one gable to the other ( $g^4$  in Figs 148—152, 154). At the gable the bar is supported by a short prop ( $g^5$  in Figs 152, 154) on the top of the upper frame of the platforms.

Across these two long bars are placed two bars in the middle, one at each side of the center post ( $g^6$  in Figs 148, 153, 154), and two planks at each side right above the planks of the floor frame ( $g^7$  in Figs 150, 151, 153, 154), all of them serving as joists. The planks are supported by

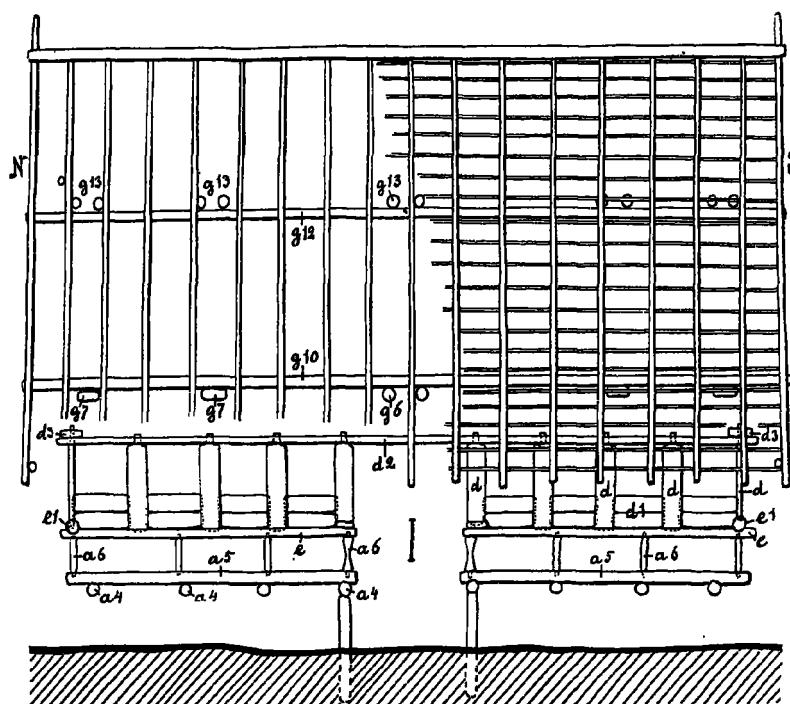


Fig. 153. The temple of Poraelea.

$a^1$ — $a^6$ : foundation;  $d$ — $d^3$ : walls;  $e$ ,  $e^1$ : lower frame round the platforms;  
 $g^6$ — $g^{13}$ : roof-truss.

two flat poles, placed at the corners of the fireplace and resting on the planks of the big floor frame ( $g^8$  in Figs 147, 150, 151). On both joists at the gable there is a high pole ( $g^1$ ,  $g^2$  in Figs 150, 151, 154), serving as support to the ridge pole.

On the top of the joists there is a layer of 4 long bars, placed in the longitudinal direction of the lobo, two in the

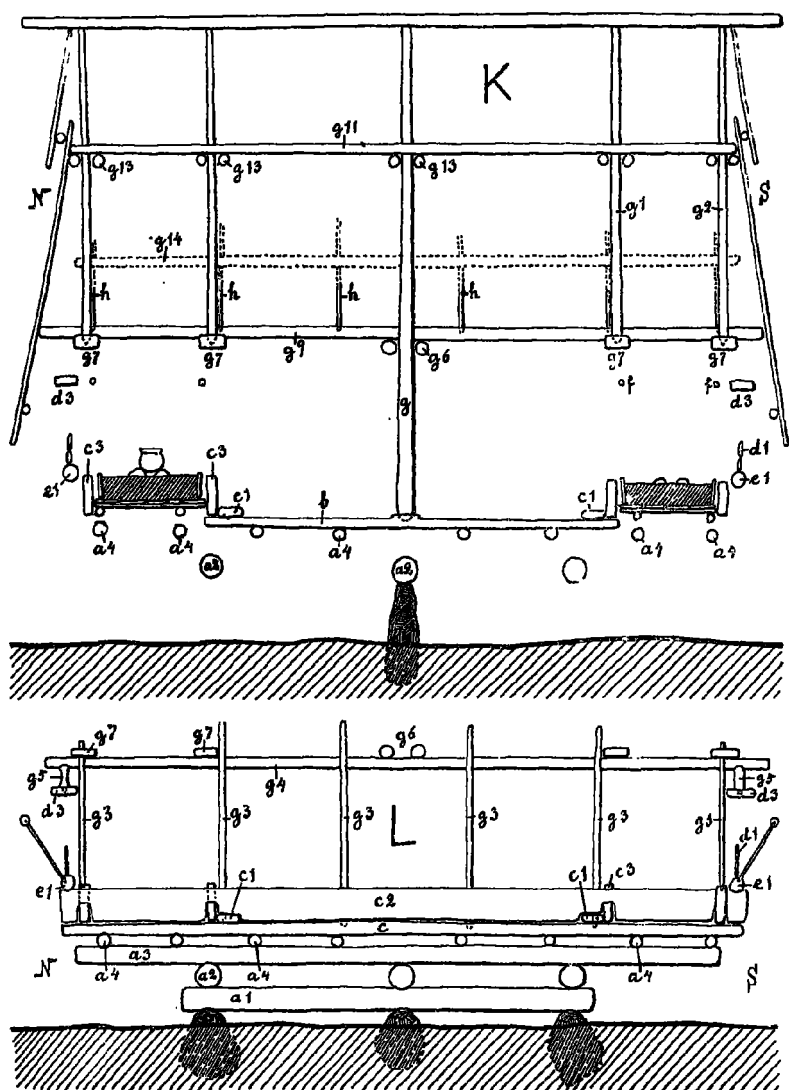


Fig. 154. The temple of Poraelea.

a<sup>1</sup>—a<sup>1</sup>: foundation; b: the plank in the middle of the floor; c—c<sup>3</sup>: floor frame; d<sup>1</sup>, d<sup>2</sup>: walls; e<sup>1</sup> lower frame of the platforms; g—g<sup>14</sup>: roof-truss; h: slanting props.

middle at each side of the center post and the four poles which carry on their top the ridge pole ( $g^9$  in Figs 148—152, 154), the other two at the end of the joists ( $g^{10}$  in Figs 148—153).

The four planks or flat poles round the fireplace are joined by means of sticks ( $f$  in Figs 150, 151, 154), carrying a layer of other sticks, used as a grate for drying wood.

The long bars in the middle of the lobo on the top of the joists hold 6 pairs of slanting props ( $h$  in Figs 150, 151, 154) the tops of which fit in two long bars ( $g^{12}$  in

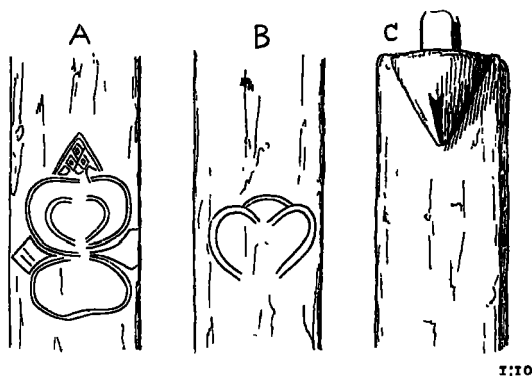


Fig. 155. Wood carvings in the temple of Poraclea.

Figs 148—153), fastened to a second row of joists, consisting of 5 pairs of bars ( $g^{13}$  in Figs 148, 150, 151, 153, 154). In order to increase the stability of the truss the slanting props are fastened to 2 long bars ( $g^{14}$  in Figs 148—151, 154).

The rafters are made fast in the usual manner, but here they do not meet on the top of the ridge pole but below. Consequently there is no slender bar above the ridge pole as is the case in the other lobos of Koelawi and Kantewoe type.

*The roofing* is as usually of big shingles.

There are two *entrances*, one at each long side.

*The staircases* are made of heavy logs in which a few

steps are hewn out. At the time of my visit there were two logs at one side and one at the other, originally there had been four at each entrance.

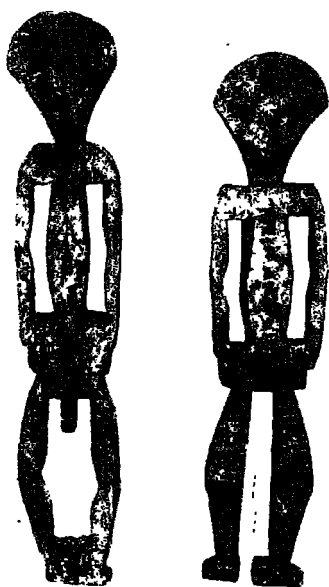


Fig. 156. K110

Wood carvings, representing a man and a woman; from the temple of Poraelea. (Doctor Kaudern's collections.)

*The adornment* of this lobo was much simpler than of the lobos of the Kantewoe type. Only a few shingles were carved at the top, and at the bottom of the roof I found the usual horns.

The carvings inside the lobo were scarce. There were no carved horns or buffalo heads, only the usual conventionalized vulva. This carving however was found at the top of almost every wall pole round the whole lobo (Fig. 155 C). Besides I noticed on both sides of such a pole some curved lines. What they were supposed to represent I could not make out (Fig. 155 A, B).

*The movables* of this lobo consisted of two rough carvings, a man and a woman (Fig. 156). They were placed in the roof of the west entrance, that is the one toward the village. These carvings were considered by the natives as being of importance to the fecundity of the population.

## Pangana.

The village of Pangana, situated in the wild mountains, was said to be abandoned by the natives, since the Dutch Government had ordered the inhabitants to move to another



Fig. 157. Plan of the Tole village of Pangana. The northern part with temple was not inhabited.

village, less inaccessible to the patrols. When I came to the place I was quite astonished to find a rather big lobo and part of the village inhabited. I could not examine the temple closely, being unprepared for such work.

The construction of the lobo was however upon the whole the same as that of Poraelea, but it was in a rather bad state.

It is situated in the western corner of the village with its gables nearly toward the north and the south.

The floor, the floor frame, the platform, the fireplaces,

the entrances, the staircases, almost everything was made in the same manner as in the lobo of Poraelea.

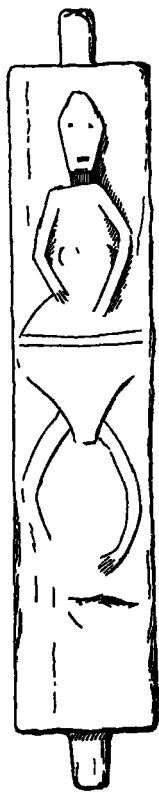


Fig. 158. Plank with wood carving, in the temple of Pangana.



Fig. 159. Wood carving, representing a woman; from the temple of Pangana. (Doctor Kaudern's collections.)

There were no carvings representing the vulva. On the wall planks at each side of the east entrance there were



two simple carvings. The one to the left was so badly treated that I could not make out what it had been. On the wall plank or pole to the right the carving represented a pregnant woman (Fig. 158).

Inside the lobo at the same entrance — the one turning toward the village — there was fastened a rough carving,

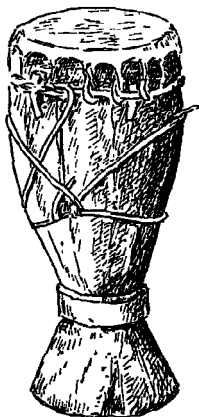


Fig. 160. Temple drum called *karatoo*; from the village of Pangana in Tole.

representing a woman (Fig. 159). This carving as well as the above mentioned was said to be of importance to the fecundity in Pangana.

*Movables.* There were some old drums of the usual kind, and in the roof were fastened a great number of bamboo sticks with a brush of dry grass at the top. To the lobo also belonged three other drums, standing on a base and not used at the same occasions as the other drums (Fig. 160). They were however not kept in the lobo but in the house of a *maradika* (a noble).



Foto W. Kaudern.

Fig. 161. The village of Siwongi in Tobakoe. The house with a shingle roof is the temple.

## C. The Siwongi type.

### Siwongi.

This lobo resembles the Kantewoe type as well as the Tole type, but still the disparity is great enough to justify its classing as a special type.

The temple is situated on the verge of a mountain, on three sides surrounded by the houses of the village of Siwongi.

In 1918 this lobo was only 5 years old and consequently in very good condition.

The gables turn toward the north and the south ( $355^{\circ}$ ). It measures 12 m. by 10 m.

The foundation consists chiefly of logs in 6 layers in the middle ( $a^1$ — $a^6$  in Figs 162, 164, 165, 167, 168), and a

special frame to support the platforms all round the structure ( $a^7$ ,  $a^8$  in Figs 162, 166, 169).

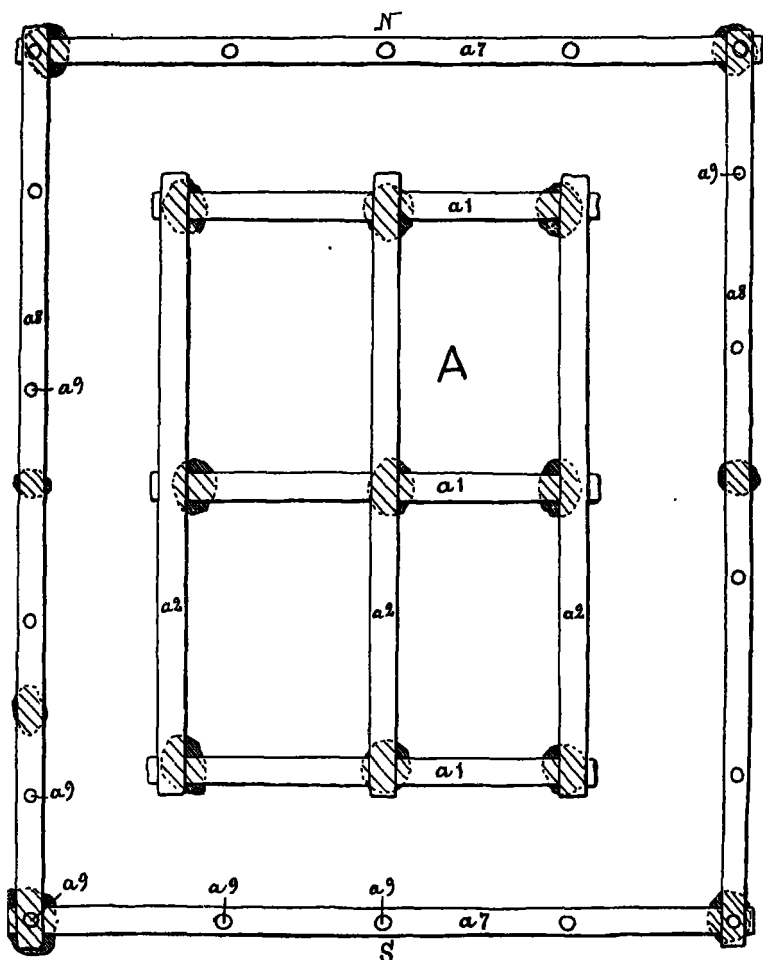


Fig. 162. The temple of Siwongi.  
 $a^1$ — $a^9$ : foundation.

1:100.

The 3 bottom logs ( $a^1$  in Figs 162, 164, 165, 167, 168) are placed crosswise, each resting on three stones. In the top

layer which is placed in the longitudinal direction of the temple, there is in the middle a slender pole and at each

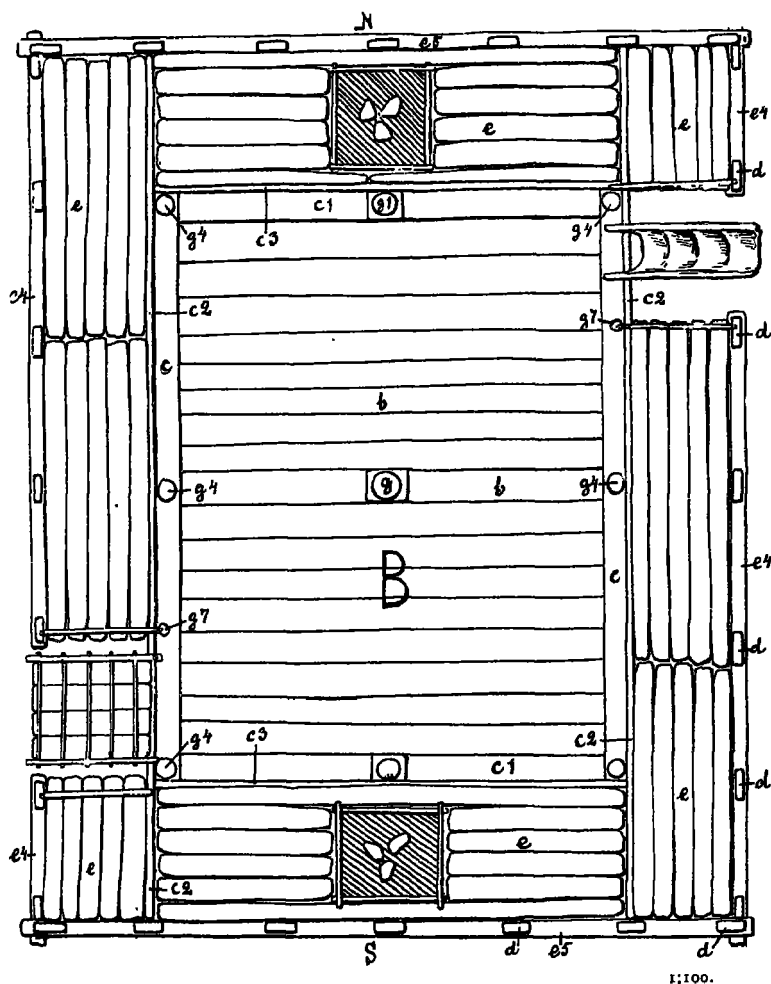


Fig. 163. The temple of Siwongi.

b: floor planks; c-c²: floor frame; d: poles, belonging to the walls; e: flooring of the platforms; e¹, e²: frame of the platforms; g-g⁷: roof-truss.

side a heavy plank (a⁶ in Figs 164, 165, 167-169), running almost from one gable to the other.

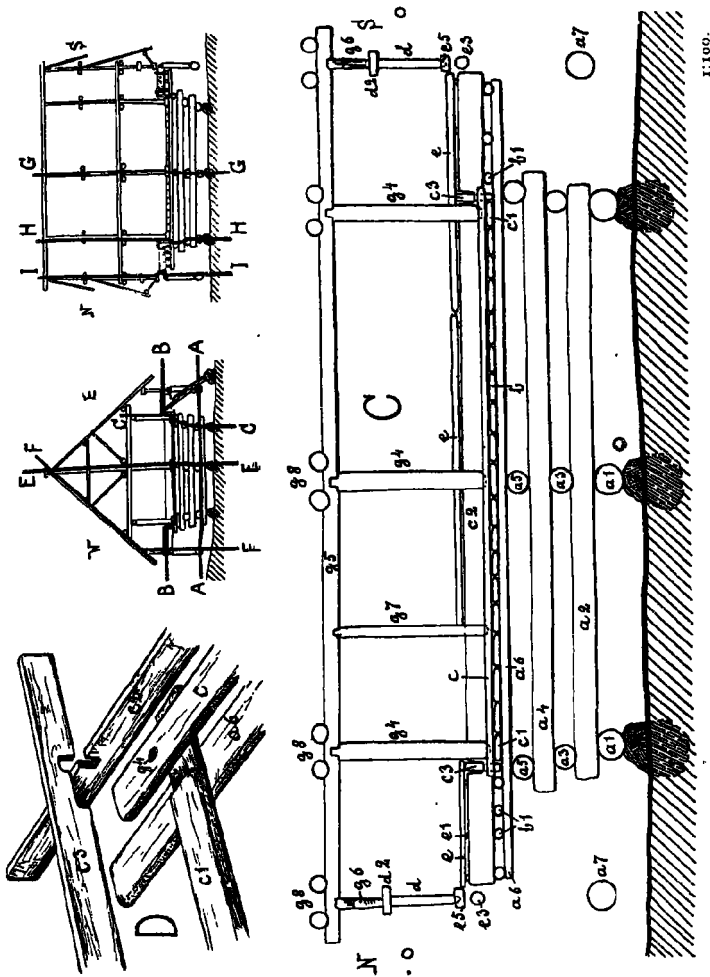


Fig. 164. The temple of Sivongi.  
a<sup>1</sup>—a<sup>7</sup>: foundation; b: floor planks; b<sup>1</sup>: bars, supporting the fireplaces; c—c<sup>5</sup>: floor frame; d, d<sup>5</sup>: walls;  
c—c<sup>5</sup>: platforms; g<sup>1</sup>—g<sup>8</sup>: roof-truss. The miniature drawings show the place of the sections A—H.

On the top of this layer the floor planks are placed (b in Figs 163—165, 167) as well as some bars, supporting the fireplaces (b<sup>1</sup> in Figs 164, 165, 169).

*The floor.* The plank in the middle of the floor as well  
W. Kaudern.

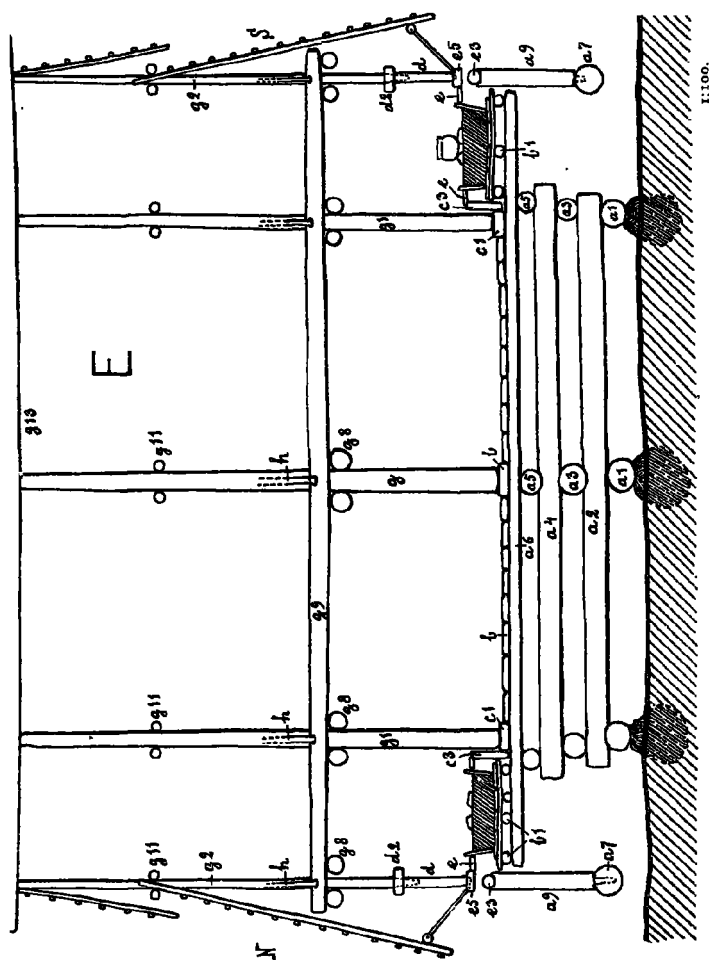


Fig. 165. The temple of Sivongk.  
 1— $a^0$ : foundation;  $b$ : floor planks;  $b^1$ : bars, supporting the fire places;  $c^1$ ,  $c^2$ : floor frame;  $d$ ,  $d^1$ : wall  
 $e$ — $e^1$ : platforms;  $g$ — $g^1$ : roof-truss;  $h$ : slanting props.

as those at the gables are heavier than the rest, having besides a swell on the top of which is placed a high post ( $g$ ,  $g^1$  in Figs 163, 165, 167, 168) forming the support of the ridge pole ( $g^{13}$ ).

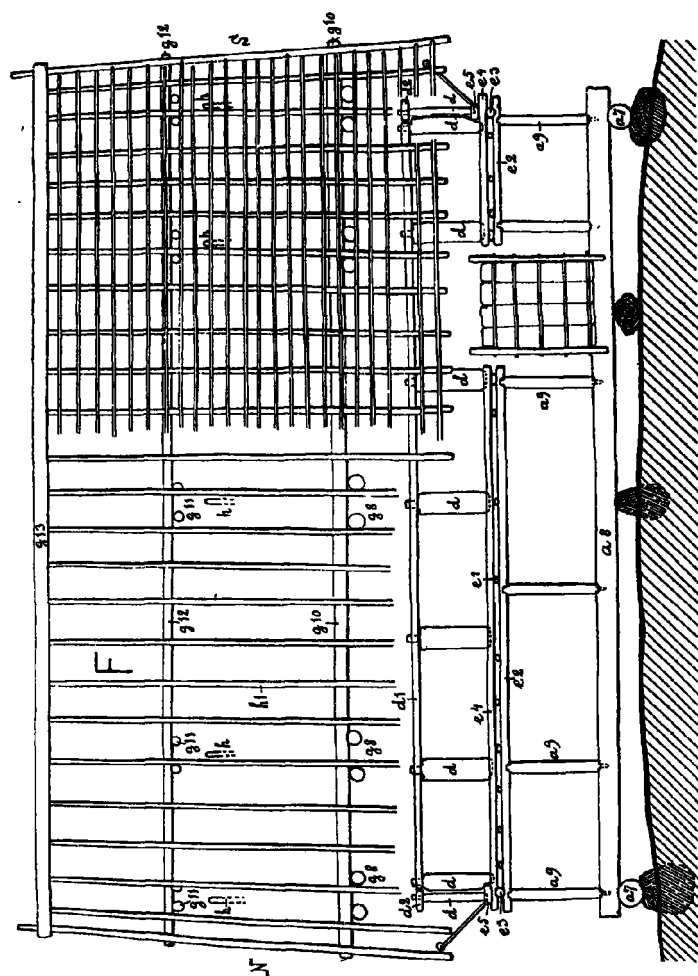


Fig. 16a. The temple of Siwongi, a7—a2; foundation; d; wall planks; d1, d2; wall frame; e1—e5; platforms; g14—g15; roof-truss; h; slanting props.

1:100.

*The floor frame.* Along the floor on the top of the planks there is a heavy plank at each side (c in Figs 163, 164, 167, 168) forming together with the outermost planks of the floor (c<sup>1</sup> in Figs 163—165, 168) an inner floor frame. Besides there

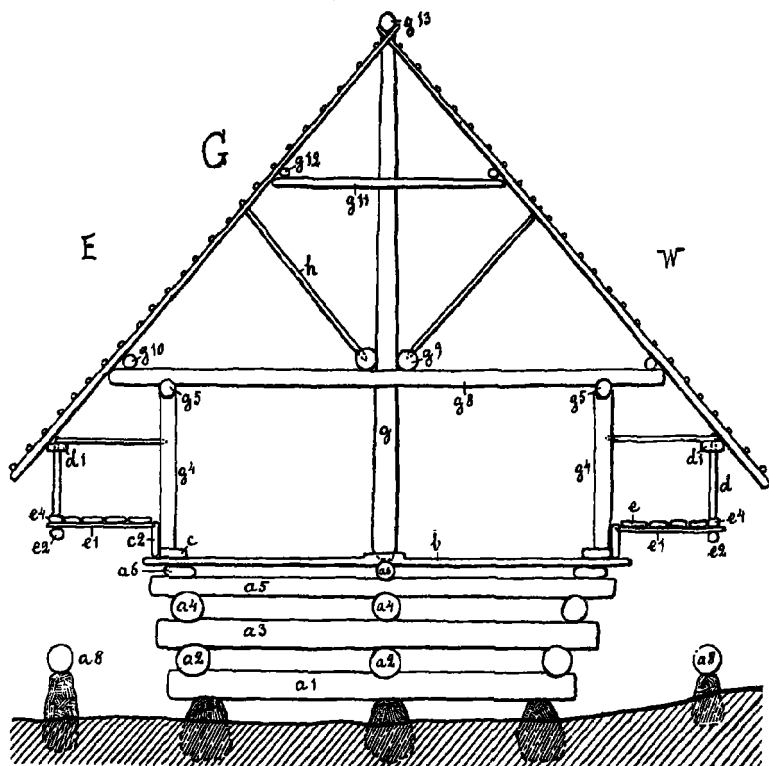


Fig. 167. The temple of Siwongi.

a<sup>1</sup>—a<sup>8</sup>: foundation; b: plank in the middle of the floor; c, c<sup>1</sup>: floor frame; d, d<sup>1</sup>: walls; e—e<sup>4</sup>: platforms; g—g<sup>13</sup>: roof-truss; h: slanting props.

is an outer frame, made of 4 long, heavy planks placed just outside the inner frame. These planks run from one gable to the other and from side to side (c<sup>2</sup>, c<sup>3</sup> in Figs 163—165, 167—169). How the planks of the frames are joined can be seen in Fig. 164 D.



The platforms are of the same breadth all round with a floor of planks (e in Figs 163—165, 167, 168), resting on sticks (e<sup>1</sup> in Figs 164, 166, 167, 169), placed in small notches

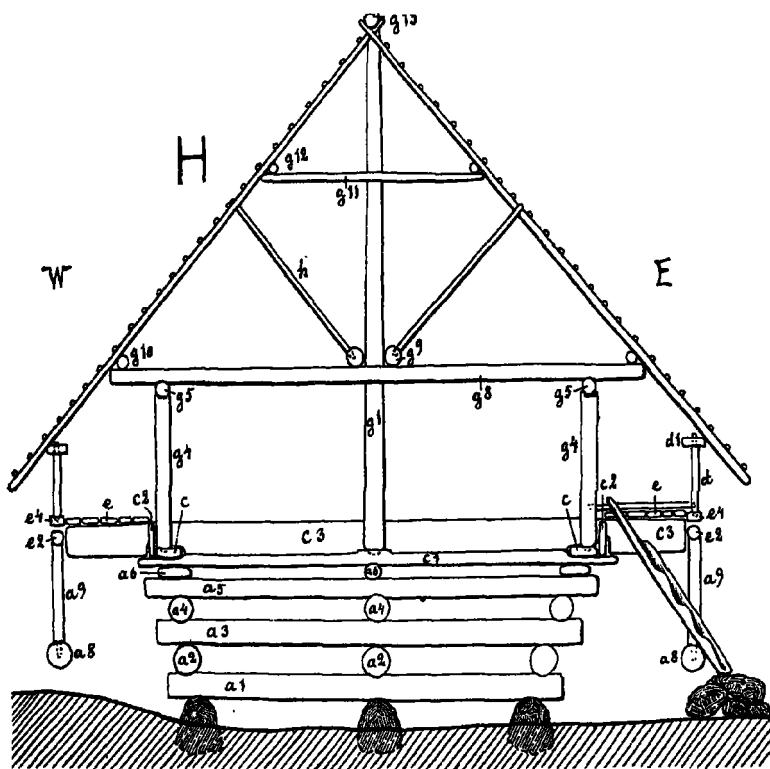


Fig. 168. The temple of Siwongi.

a<sup>1</sup>—a<sup>4</sup>: foundation; c—c<sup>3</sup>: floor frame; d, d<sup>1</sup>: walls; e—e<sup>4</sup>: platforms; g<sup>1</sup>—g<sup>13</sup>: roof-truss; h: slanting props.

in the outer floor frame. Outward they are supported by the bars forming a frame all round the lobo (e<sup>2</sup>, e<sup>3</sup> in Figs 164—169), only interrupted by the entrances.

This frame is supported by a number of props (a<sup>3</sup> in Figs 162, 165, 166, 168, 169), standing on the frame below,

made of 4 logs ( $a^7$ ,  $a^8$  in Fig. 162) placed on the top of 7 stones.

The platforms are bordered by a second frame, made of slender beams ( $e^4$ ,  $e^5$  in Figs 163—169). On this frame

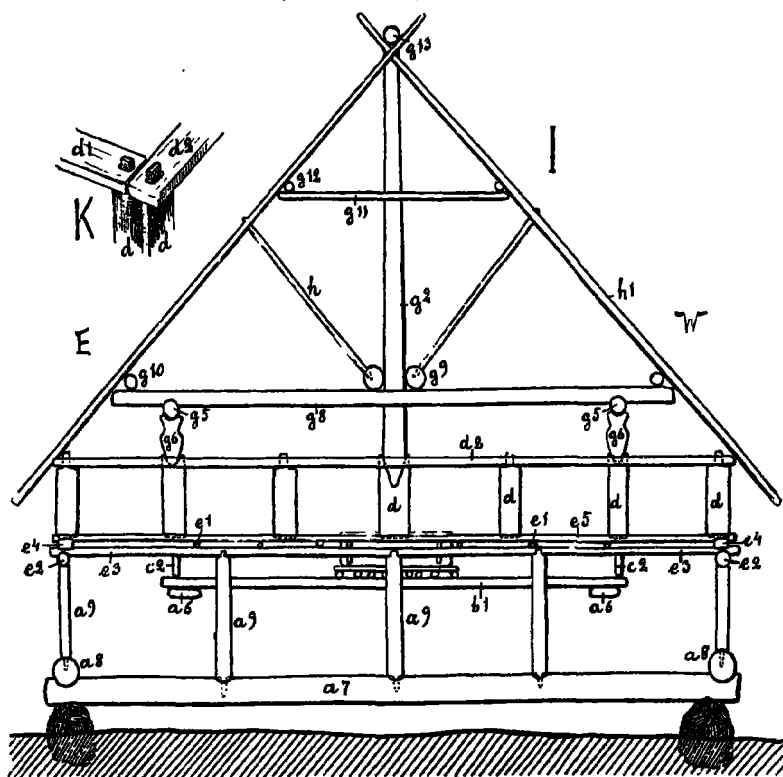


Fig. 169. The temple of Siwongi.

$a^6$ — $a^9$ : foundation;  $b^1$ : bars, supporting the fireplaces;  $c^2$ : floor frame;  
 $d$ ,  $d^2$ : walls;  $e^1$ — $e^5$ : platforms;  $g^2$ — $g^{13}$ : roof truss;  $h$ : slanting props.

are raised 7 wall planks on each side ( $d$  in Figs 163—169). Differently to the Kantewoe lobo and to the Tole lobo there are no boards between these upright planks, thus the platforms lack here a wall. At the top of the planks there is a tap, fitting in a hole in a frame of 4 planks ( $d^1$ ,  $d^2$  in

Figs 164—169). These planks are not joined in the corners as in most lobos (Fig. 169 K).

*The fireplaces* are made in the usual manner. How they are supported I have already mentioned (Figs 165, 169).

*The roof-truss.* The ridge pole ( $g^{13}$  in Figs 165—169) is supported by the 3 posts in the middle of the structure. Besides there is at the gables a flat pole ( $g^2$  in Figs 165, 169), fitting in a hole in the plank of the upper frame of the platform and with a tap in the upright wall plank below (Fig. 169).

The bottom of the roof is supported by the plank frame on the top of the platforms.

Along the floor rise at each side 3 poles ( $g^4$  in Figs 163, 164, 167, 168) on the top of the inner floor frame, holding in their crotches a heavy bar ( $g^5$  in Figs 164, 167—169), running from one gable to the other. At the gables this bar is supported by a prop ( $g^6$  in Figs 164, 169), fitting by means of a tap in the plank frame on the top of the platforms. Besides there is a slender pole at each entrance ( $g^7$  in Figs 163, 164).

Across the long bars are placed 5 pairs of heavy bars, serving as joists, ( $g^8$  in Figs 164—169) each pair close to a ridge post. On these joists is another layer of bars, running from gable to gable, two bigger ones in the middle ( $g^9$  Figs 165, 167—169), two smaller ones at the ends of the joists ( $g^{10}$  in Figs 166—169). The bars in the middle support 5 pairs of slanting props, fastened to the rafters ( $h$  in Figs 165—169).

Right above these joists there is a second row of joists of the same number as the ones below, only less heavy. They are tied to the 5 ridge posts in the middle of the structure ( $g^{11}$  in Figs 165—169) and carry at the ends a slender bar ( $g^{12}$  in Figs 166—169).

The rafters cross below the ridge pole just as they do in the lobo of Poraelea.

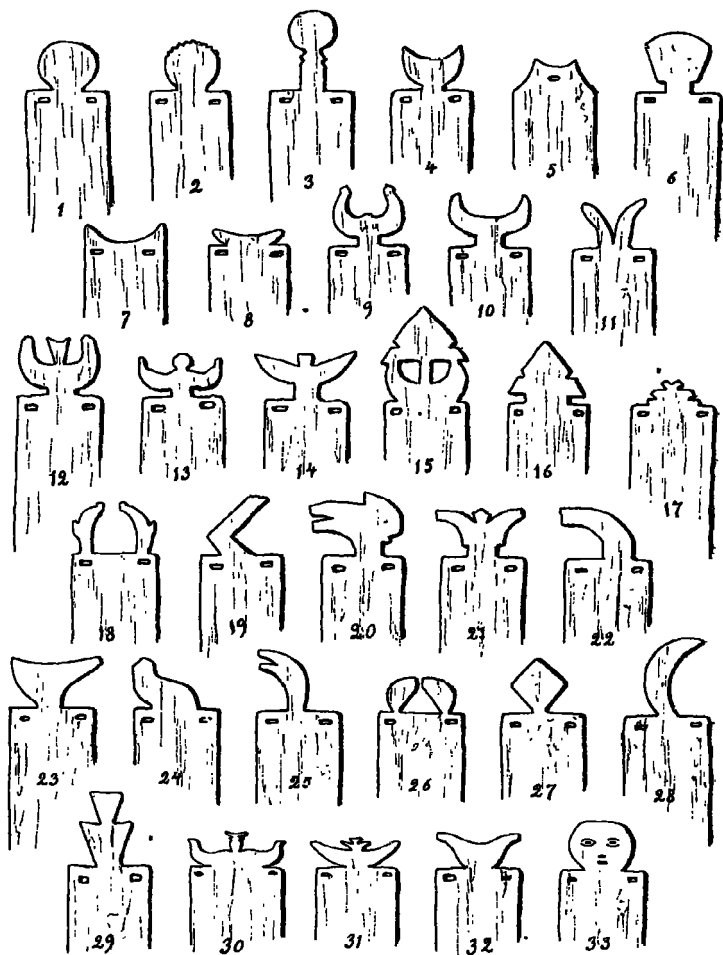


Fig. 170. Wooden shingles carved at the upper end. 1—28 from the temple of Siwongi; 29 from the temple of Pangana; 30—33 from the temple of Kantewee. According to the natives they are meant to represent the following things 1—3 and 33 represent a man's head, 4, a man whose head has been cut off at headhunting. 5, a man without a head. 6? 7, 8, the forehead of a young buffalo, with still very small horns. 9; the horns of an old buffalo, 10 the horns of the common cattle; 11, horns of a goat; 12, 13, 30, 15? 16, point of a spear; 17 a house at the village of Sakedi in the Paloe Valley; 18, the jaw of a milliped; 19, possibly one hind leg of a milliped; 20, the head of the Buceros.; 21, the tail of a black bird; 22? 23, possibly the head of the female Buceros; 24, the upper part of the sheath of a chopping knife; 25, a sword hilt; 26, two sword hilts; 27, the square of the ornament of the women's head ring «tali walo», 28, the moon; 29?, 33?

*The gables* are made in the usual manner as can be seen in Figs 165, 169.

*The roofing* is the usual one of big shingles. The ridge is covered by a layer of idjoek.

There are two *entrances*, one at each side, close to the gable platform, the eastern one near the north gable, the western one near the south gable (Figs 163, 166, 168).

*The staircase* is at the east side made only of a big log. At the opposite side there are 4 short, heavy planks, kept together by 5 pairs of sticks, the ends fitting in holes in a board, put on edge at each side of the planks. The sticks serve as steps (Fig. 166).

There are no other *adornments* than the shingles being carved at the upper end in some way or other (Fig. 170). At the bottom of the roof the shingles are not carved in the same manner as in the other lobos where two or three shingles together form a figure. Here the horns are much smaller both of them belonging to one shingle (Fig. 104:7).

At the gables the ridge is adorned with small horns of idjoek.

No *movables* were kept in this lobo.



W. Kaudern Photo

Fig. 171 The temple of Biro in Tobakoe.

## Biro.

I do not hesitate to class this small but comparatively well built lobo as a lobo of the Siwongi type in spite of the difference.

The temple is situated in the SE. part of the village with its gables very nearly toward the north and the south ( $350^{\circ}$ ).

It measures 8 m. by 7.5 m.

*The foundation* of the floor is the same as in the Siwongi lobo. The only difference is that the poles of the two layers at the top ( $a^5$ ,  $a^6$  in Figs 173—177) are so long here, that they are able to form the support of the poles and bars supporting the outside of the platform. There is here no special foundation necessary as in the lobo of Siwongi.

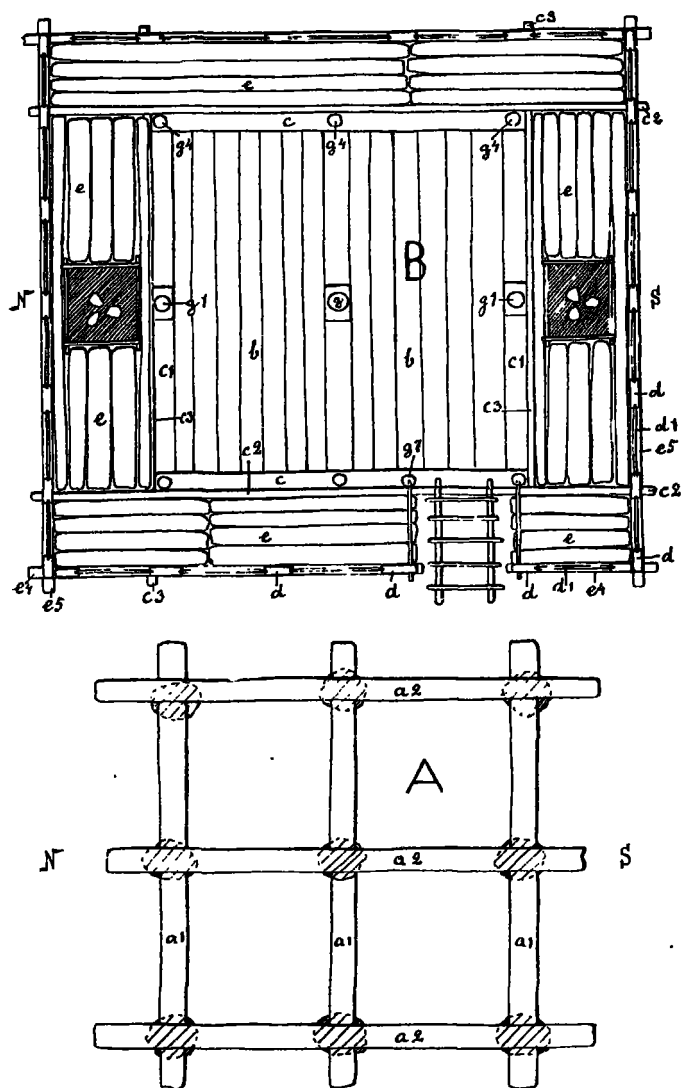


Fig. 172. The temple of Biro.

a<sup>1</sup>, a<sup>2</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d, d<sup>1</sup>: walls; e: flooring of the platforms; e<sup>4</sup>, e<sup>5</sup>: frame of the platforms; g—g<sup>7</sup>: roof-truss.

The construction of the floor as well as the floor frame is the same as in the former lobo, but the planks of the outer frame are here somewhat longer, so as to be able to help to support the outside of the platforms ( $c^1$ ,  $c^2$  in Figs 172—177).

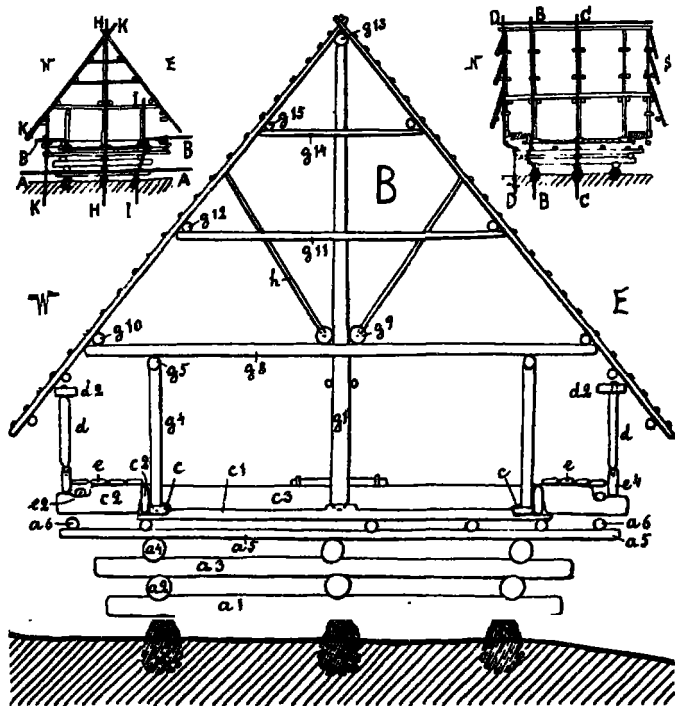


Fig. 173. The temple of Biro.

$a^1$ — $a^6$ : foundation;  $c$ — $c^2$ : floor frame;  $d$ — $d^{12}$ : walls;  $e$ — $e^4$ : platforms;  $g^1$ — $g^{15}$ : roof-truss;  $h$ : slanting props. The miniature drawings show the place of the sektionen A—K.

The platforms are of the same width all round the lobo with a floor of planks ( $e$  in Figs 172—176), supported by sticks, square to the planks. At the sides the sticks rest on two slender bars ( $e^2$  in Figs 174, 175, 177). How the platforms are supported can be followed in Figs 173—175, 177 k.



Outwards; the platforms are bordered by a frame of 4 planks, put on edge ( $e^1$ ,  $e^5$  in Figs 172—177). On this frame are raised wall planks, 7 at each gable and 6 at each side ( $d$  in Figs 172, 173, 175—177), between which a board

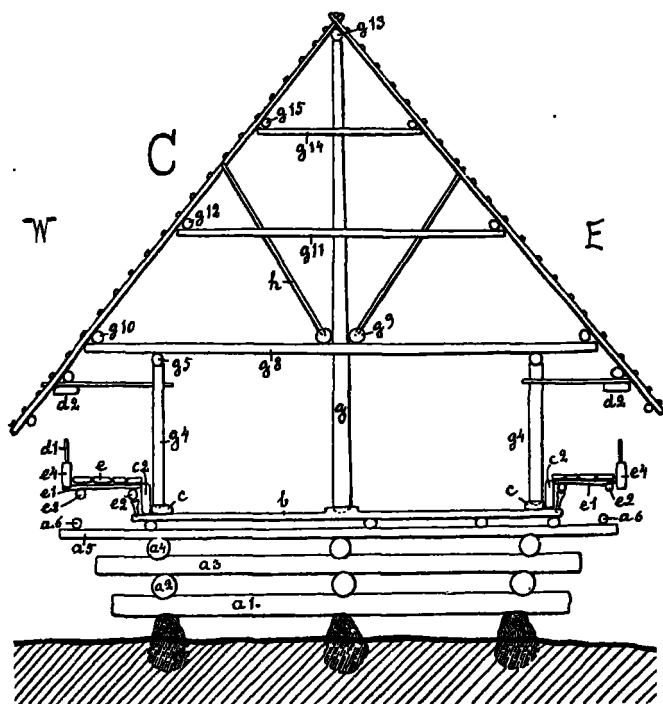


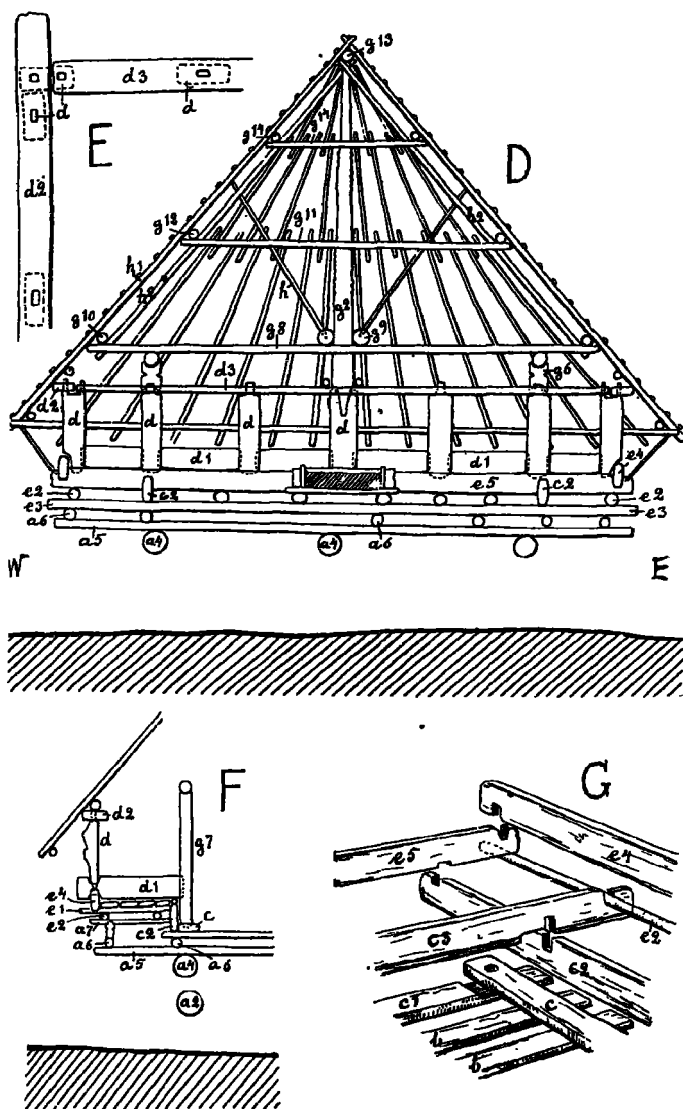
Fig. 174. The temple of Biro.

1:100.

$a^1$ — $a^6$ : foundation;  $b$ : the plank in the middle of the floor;  $c$ ,  $c^2$ : floor frame;  $d^1$ ,  $d^2$ : walls;  $e$ — $e^1$ : platforms;  $g$ — $g^{15}$ : roof-truss;  $h$ : slanting props.

is pushed in ( $d^1$  in Figs 172, 174—177), forming all together a low wall round the whole lobo. At each side of the entrance there is also a low wall as can be seen in Fig. 175 F  $d^1$ .

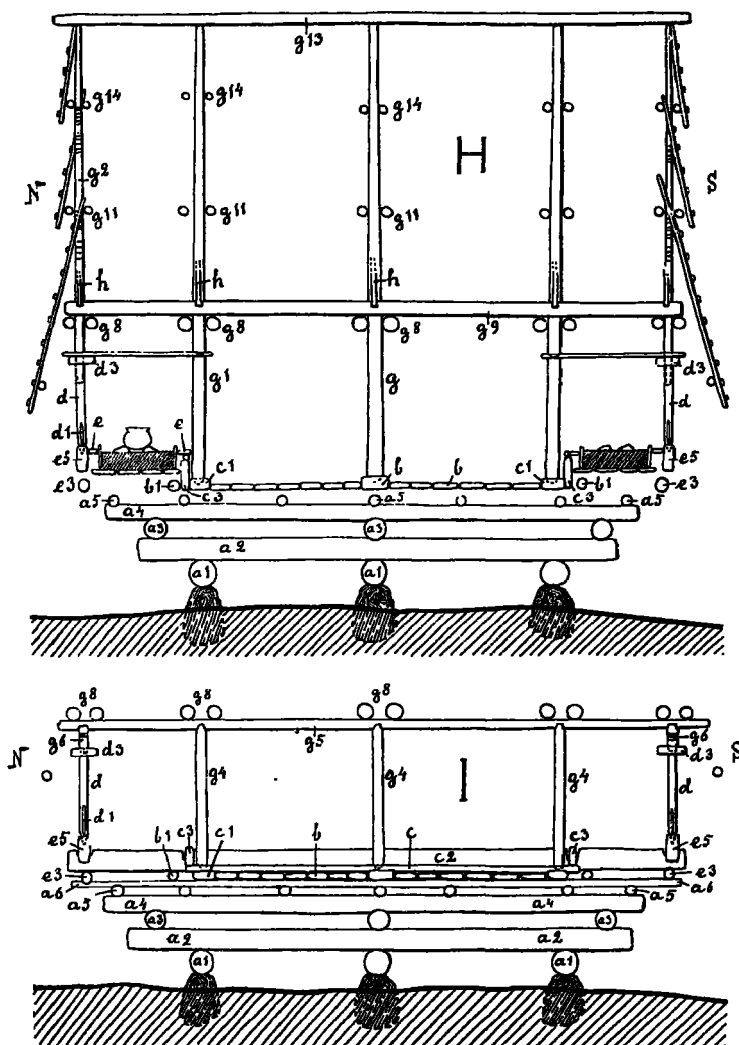
The tops of the upright wall planks are kept in place by means of a frame of 4 planks  $d^2$ ,  $d^3$  in Figs 173—177. How these are joined can be seen in Fig. 175 F.



D, F 1:100. G 1:50.

Fig. 175. The temple of Biro.

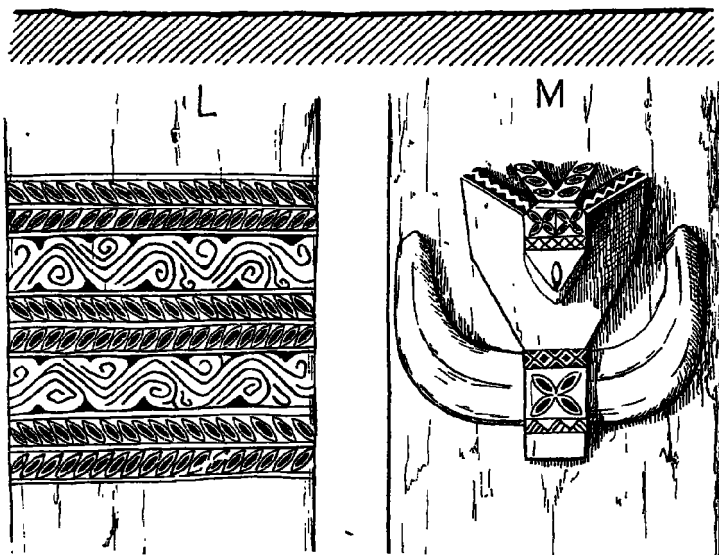
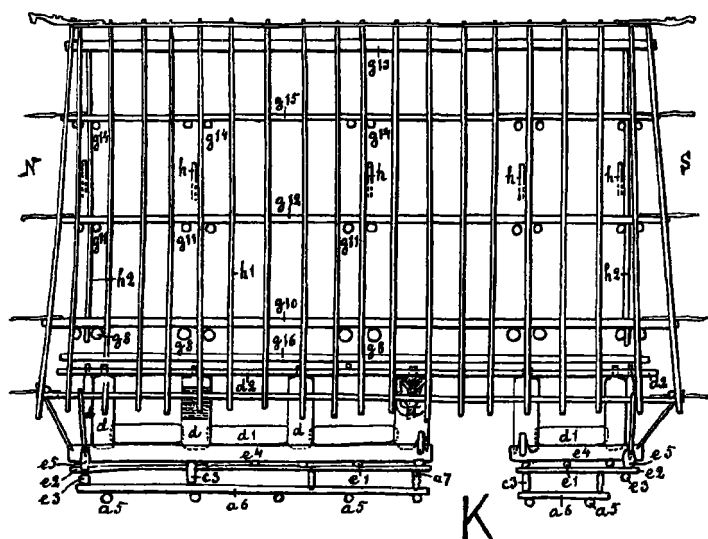
a<sup>2</sup>—a<sup>7</sup>: foundation; b: floor planks; c—c<sup>3</sup> floor frame; d—d<sup>13</sup>: walls; c—c<sup>5</sup> platforms; g—g<sup>14</sup>: roof-truss; h: slanting props; h<sup>1</sup>, h<sup>2</sup>: rafters.



1:100.

Fig. 176. The temple of Biro.

a<sup>1</sup>—a<sup>6</sup>: foundation; b: floor planks; b<sup>1</sup>: bar, <sup>4</sup>supporting the fireplace;  
c—c<sup>3</sup>: floor frame; d—d<sup>3</sup>: walls; e—e<sup>3</sup>: platforms; g—g<sup>14</sup>: roof truss; h:  
slanting props.



K. 1:100; L, M 1:10.

Fig. 177. The temple of Biro.

a<sup>5</sup>, a<sup>7</sup>: foundation; c<sup>3</sup>: floor frame; d—d<sup>5</sup>: walls; e<sup>1</sup>—e<sup>7</sup>: platforms; g<sup>8</sup>—g<sup>16</sup>: roof-truss; h: slanting props; h<sup>1</sup>, h<sup>2</sup>: rafters. L, M.: wood carvings.

The two *fireplaces* at the gables are of the usual kind. They are supported by two bars, placed crosswise, resting on two long bars ( $b^1$ ,  $e^3$  in Figs 175, 176) on the top of the uppermost layer of the foundation.

The *roof-truss* is almost the same as in the Siwongi lobo as can be seen in the figures. In this lobo however there are joists in three rows ( $g^8$ ,  $g^{11}$ ,  $g^{14}$  in Figs 173—177) instead of only two as in the Siwongi lobo. Besides there is at each gable two bars ( $h^2$  in Figs 175, 177) close to the rafters crossing below the ridge pole.

In this lobo the rafters do not cross below the ridge pole. That is why we here find a slender bar, resting in the crosses of the rafters (Figs 173—175, 177).

At the gables the rafters are not as usual placed in two stories but in three as can be seen in Figs 175, 176. Consequently the gables have in this lobo two openings instead of one.

There is only one *entrance*, placed at the west side close to the southern gable platform.

At the time of my visit there was no proper *staircase*, only a ladder of sticks, but very likely there had originally been a staircase like the one of the east entrance of the Siwongi lobo, a heavy log with some steps hewn out.

The *roofing* was not the usual one of wooden shingles. For the top of the roof had been used common atap, at the bottom shingles of bamboo. The roof was here as in all dwellings covered with idjoek.

*Adornment.* I could not decide whether there had been any horns of idjoek or not at the gables, but there is an odd board, carved in the shape of some animal (Fig. 177 K), sticking out just as we have seen in Toro, in Tole and at other places. From the edge of the roof at the gables project a number of laths similar to the one at the ridge, or only pointed at the end (Fig. 177 K).

Inside the lobo I found on two upright wall planks the same carvings as in the Poraelea lobo, that is the conven-

tionalized vulva. Two other of these planks were on the outside adorned with carvings one of which consisted of 5 borders, the two outer and center borders having a design of slanting ellipses in two rows, the other two a scroll design (Fig. 177 L).

The other carving (Fig. 177 M), close to the entrance was a combination of the buffalo's horns and a vulva with some geometric figures.

As an adornment may also be classed the symmetrical incisions in the ridge poles of the gables (Fig. 175 D g<sup>2</sup>).

There were no *movables*.

## Lawe.

It is difficult to class this lobo. It resembles the Siwongi lobo as to the 3 main posts, the floor frame and the absence of horizontal wall boards, but in many other respects it is different to this lobo. As certain details remind one of the lobo of Biro which I have classed as a temple



Fig. 178. Plan of the village of Lawe in Tobakoe. The small crosses indicate bamboo thickets.

of Siwongi type, I have judged it most correctly to class the Lawe lobo as a temple of this type.

It is situated in the SE. corner of the village with the gables almost toward the north and the south ( $345^{\circ}$ ). Fig. 178.

It measures 9 m. by 8 m.

*The foundation* resembles very much that of the Biro lobo, here less height however with logs in only 4 layers. The bottom layer, running in the longitudinal direction of the lobo, consists of two logs ( $a^1$  in Figs 179, 181, 183, 184) instead of 3 as in the Siwongi lobo. The structure will thus rest only on 6 stones (179 A). In the second

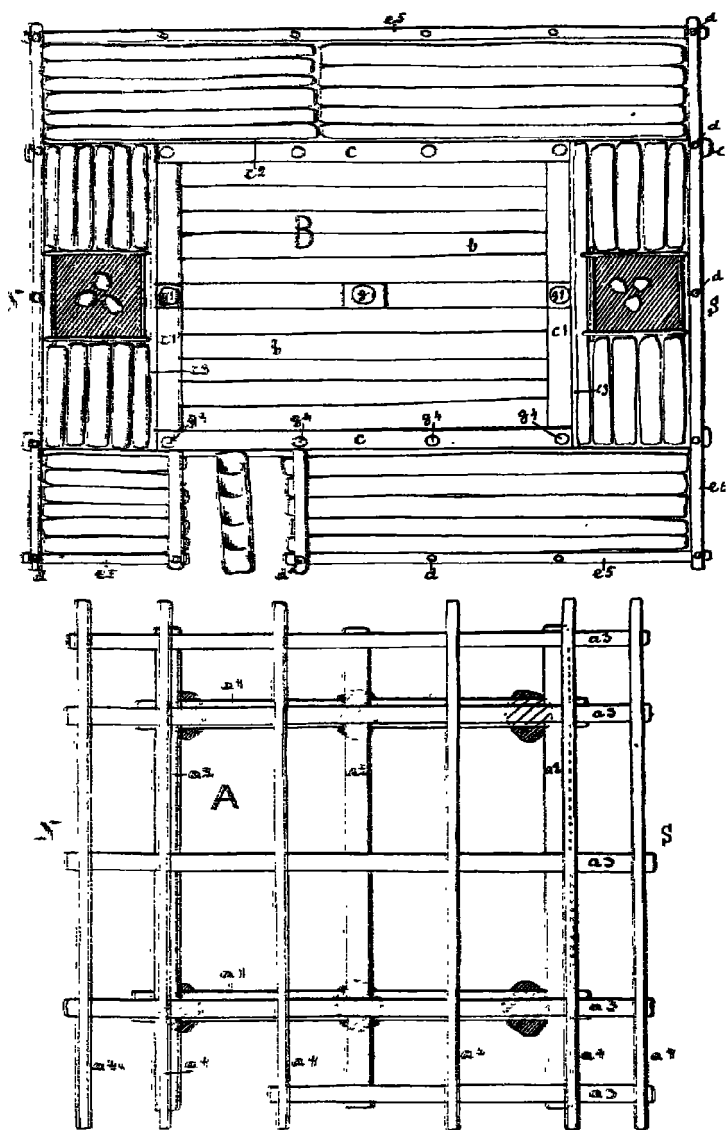
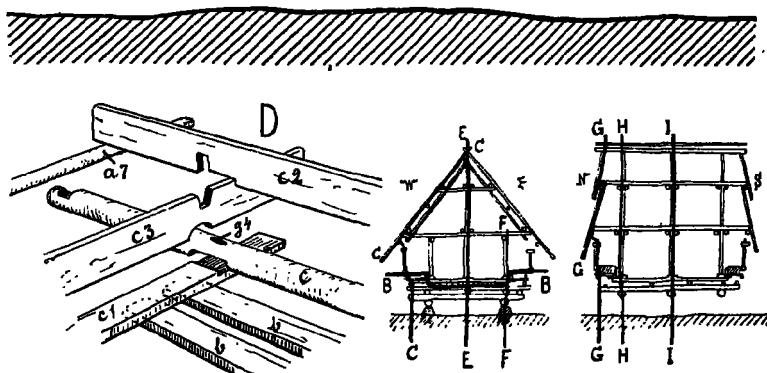
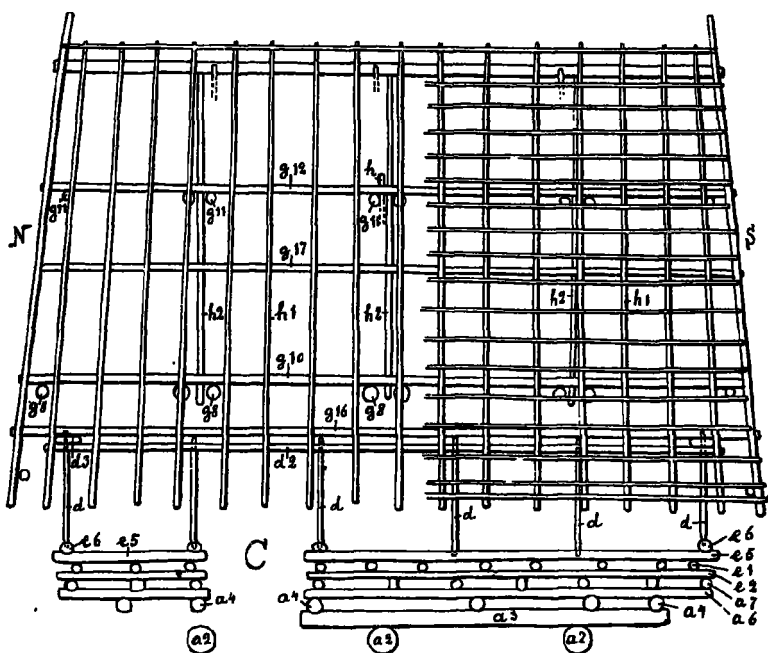


Fig. 100. The temple of Lave

a<sup>1</sup>—a<sup>4</sup> foundations; b floor planks; c—c<sup>1</sup> floor frames; d: poles belonging to the walls; e<sup>1</sup>—e<sup>4</sup> frame of the platform; g—g<sup>1</sup> roof-truss

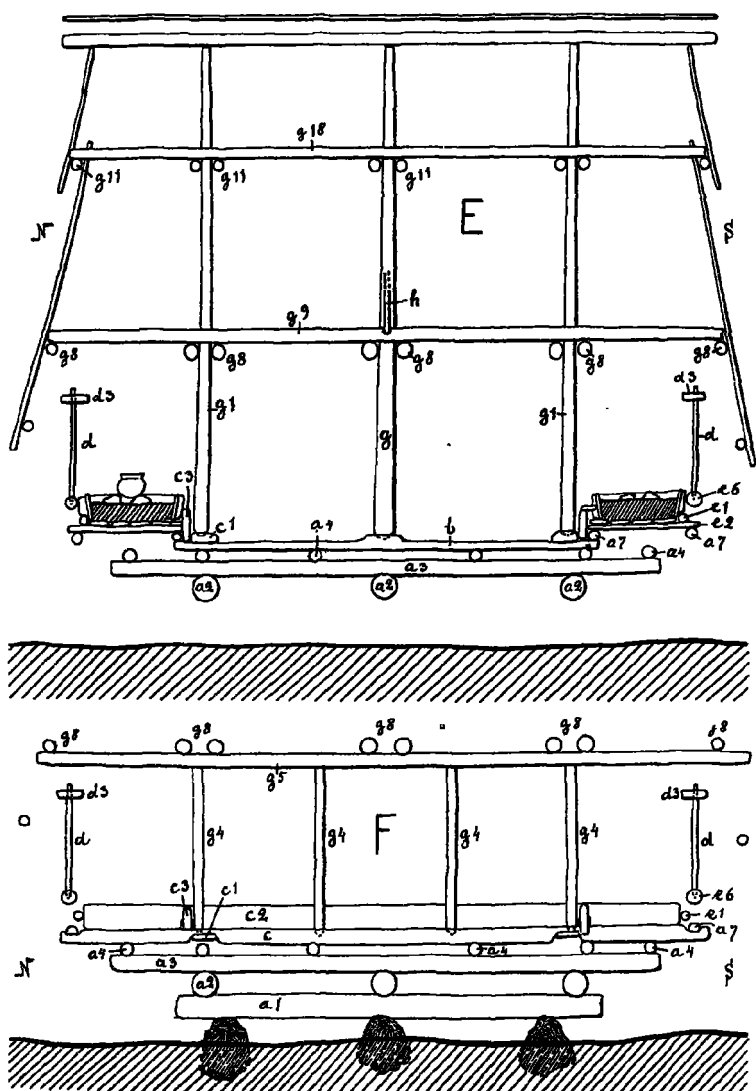




C 1:100.

Fig. 180. The temple of Lawe.

a<sup>1</sup>—a<sup>7</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d: poles belonging to the walls; d<sup>3</sup>, d<sup>2</sup>: upper wall frame; e<sup>1</sup>—e<sup>6</sup>: platforms; g<sup>1</sup>, g<sup>2</sup>—g<sup>10</sup>: roof-truss; h: slanting props; h<sup>1</sup>, h<sup>2</sup>: rafters. The miniature drawings show the place of the sections A—I.

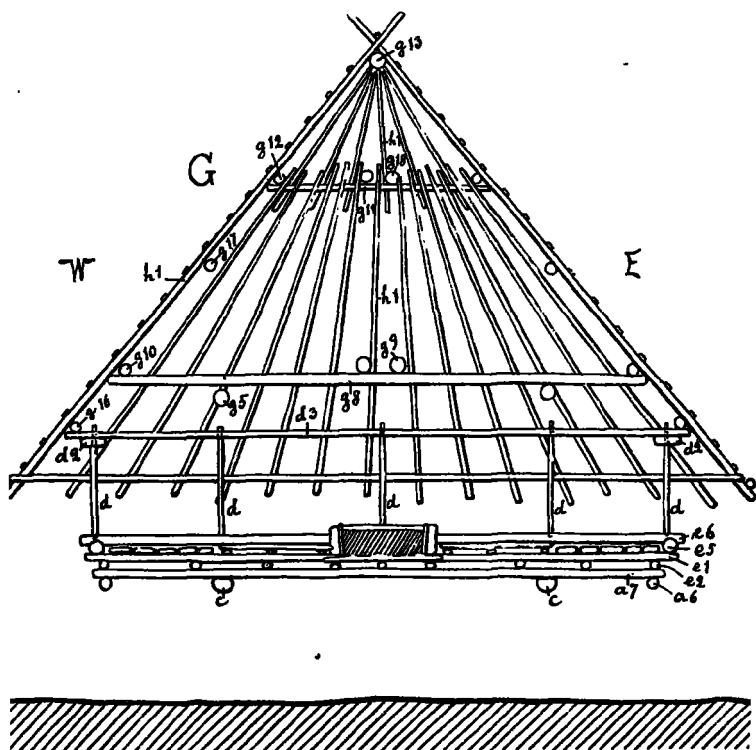


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Fig. 181. The temple of Jawe.

a<sup>1</sup>-a<sup>7</sup>: foundation; b: plank in the middle of the floor; c-c<sup>2</sup>: floor frame;  
 d: poles, belonging to the walls; d<sup>3</sup>: poles belonging to the walls; d<sup>3</sup>: wall  
 frame; e<sup>1</sup>-e<sup>6</sup>: platforms; g-g<sup>18</sup>: roof-truss; h: slanting props.

layer there are 3 rather long poles ( $a^2$  in Figs 179—181, 183, 184) on the top of which are placed 5 logs ( $a^3$  in Figs 179—181, 183, 184). The top layer consists of 6 slender



1:100.

Fig. 182. The temple of Lawe.

$a^6$ ,  $a^7$ : foundation; c: floor frame; d: poles belonging to the walls;  $d^2$ ,  $d^3$ : wall frame;  $e^1$ — $e^6$ : platforms;  $g^5$ — $g^{16}$ : roof-truss;  $h^1$ : rafters.

poles or bars ( $a^4$  in Figs 179—181, 183), forming the support of the floor, the floor frame and the platforms.

The floor planks ( $b$  in Figs 179—181, 183, 184) are in this lobo parallel to the long sides of the structure, contrary to those of the lobos of Biro and Siwongi. In this respect the Lawe lobo agrees with the temples of

Kantewoe and Poraelea. The floor plank in the middle is heavier than the rest and has in its center a swell on which is placed the center post of the structure (g in Figs 179, 181, 184).

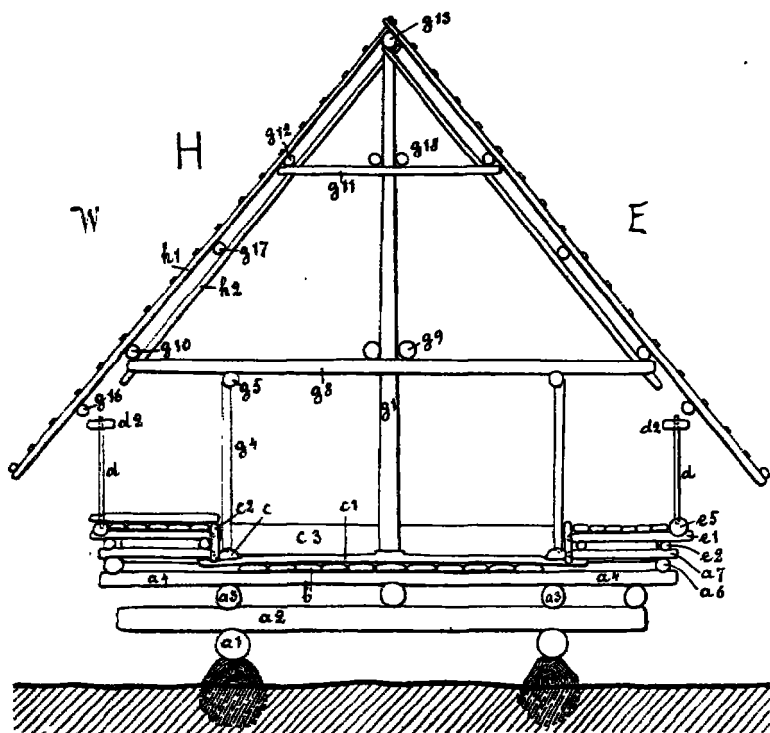


Fig. 183. The temple of Lawe.

a¹—a⁷, foundation; b, floor planks; c¹—c³, floor frame; d, poles, belonging to the walls; d², wall frame; e¹—e⁷, platforms; g¹—g¹⁸, roof truss; h¹, h², rafters.

The floor frame is double. At the end of the floor planks there is at each side a plank (c¹ in Figs 179—181, 183), forming the short sides of the inner floor frame. In the center of these planks there is a swell on the top of which is raised a pole (g¹ in Figs 179, 181, 183), supporting

together with the center post the pole of the ridge. The long sides of the inner floor frame consist of 2 long, almost round poles, running from gable to gable (c in Figs 179—184).

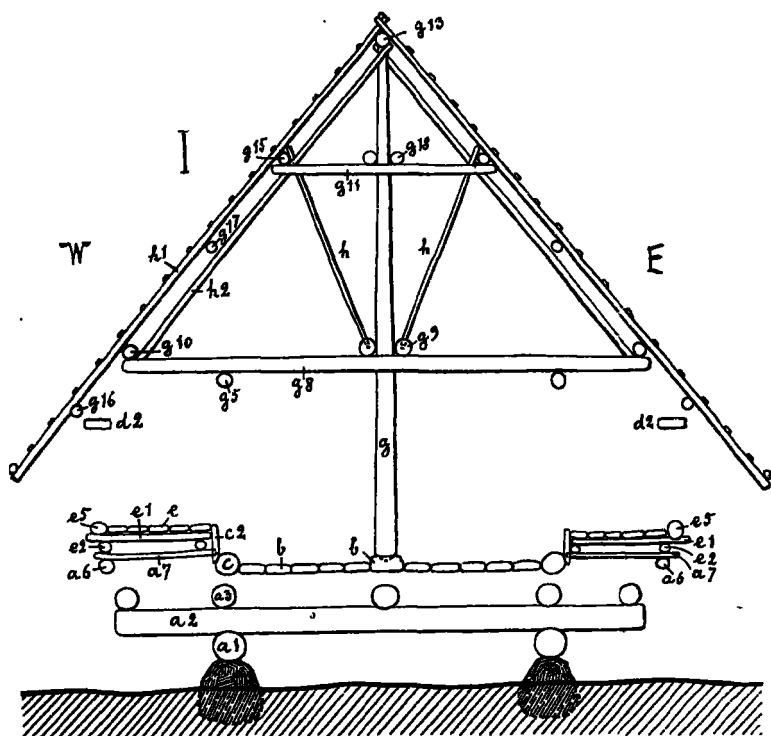


Fig. 184. The temple of Lawe.

a<sup>1</sup>—a<sup>7</sup>: foundation; b: floor planks; c, c<sup>2</sup>: floor frame; d<sup>2</sup>: wall frame; e—e<sup>3</sup>: platforms; g—g<sup>18</sup>: roof-truss; h: slanting props; h<sup>1</sup>, h<sup>2</sup>: rafters.

The outer floor frame is made of 4 planks, put on edge, of about the same length as the corresponding planks of the Siwongi lobo (c<sup>2</sup>, c<sup>3</sup> in Figs 179—181, 183, 184). How the planks and poles of the floor frames are joined at the corners can be seen in Fig. 180 D.

The *platforms* are all round of the same width. They are supported almost in the same manner as in the lobo of Biro. (Compare Fig. 175 F with Fig. 183.)

There are two *fireplaces* in the middle of the gable platforms (Fig. 179 B).

There are no *walls* in this lobo as I have already mentioned. The outer border of the platforms, a frame of round bars ( $e^3$ ,  $e^6$  in Figs 179—184), carries no upright wall planks but a number of slender poles ( $d$  in Figs 179—183), one at each corner, 4 at each long side and 3 at each gable, kept in place by an upper frame of 4 planks ( $d^2$ ,  $d^3$  in Figs 180—184), the poles fitting with their pointed tops in the holes of the frame. At the corners where the planks cross, the pole penetrates both planks (Figs 180, 182). At each end of the gable planks which project somewhat beyond the side plank, there is a long, slender bar ( $g^{16}$  in Figs 180, 182—184) to which the rafters are fastened.

*The roof-truss.* On the inner floor frame 4 heavy poles are raised at each side ( $g^4$  in Figs 179, 180 D, 181, 183), being hollowed out so as to be able to support a long pole ( $g^5$  in Figs 181—184) bound to the top of it. At the gables there are no props here, such as we found in the lobos of Siwongi and Biro.

Across the 2 poles is placed a row of bars, serving as joists: one pair at each side of the 3 main posts ( $g^8$  in Figs 180—184) and an odd joist at each gable. They carry a pair of long bars, running from gable to gable at both sides of the main posts ( $g^9$  in Figs 181—184) as well as an odd bar at each side ( $g^{10}$  in Figs 180, 182—184), supporting the rafters.

Higher up there is a second row of joists of the same number as those below, placed in the same manner ( $g^{11}$  in Figs 180—184) and carrying on their top long bars, running from gable to gable ( $g^{12}$ ,  $g^{1b}$ , in Figs 180—184).

Another support to the roof we find in two slanting bars in the center of the structure ( $h$  in Figs 180, 181, 184) and

3 pairs of inner rafters ( $h^2$  in Figs 180, 183, 184), tied to the bars, carrying the real rafters. Between the two odd bars on top of the joists of the first and the second row, there is another bar ( $g^{17}$  in Figs 180, 182—184), helping to support the rafters.

The rafters cross here on the top of the ridge pole, just as they do in the Biro lobo, and the ridge is made in the usual manner.

The rafters of the gables are here placed in two rows or stories instead of three as in the Biro lobo.

The battens are narrow laths of bamboo.

*The roofing* is the usual one of big shingles.

*The entrance* is situated at the west side, close to the north platform (Fig. 179 B).

There was no *adornment* to be seen here. But very likely the old decayed shingles at the bottom of the roof had been carved in the usual manner.

No *movables* were found in the lobo.

### III. The Mopahi type.

#### Mopahi.

At the time of my visit in 1918 the lobo of Mopahi was in very bad condition. I did not study it carefully as I expected to come back to this place once more, but unfortunately I had to change my project. A year later the lobo fell and has not been replaced by another, according to the missionary who is still working among the natives of these districts.

From my brief notes it is however evident that it had been worth while to study this lobo closer, being in several respects different from all other lobos. That is why I have classed it as a special type, although it resembles the Kantewoe lobo.

The temple was situated at the east end of the long stretched village. There were only a couple of houses just SE. of the lobo. The gables very nearly turned toward the south and the north ( $355^{\circ}$ ).

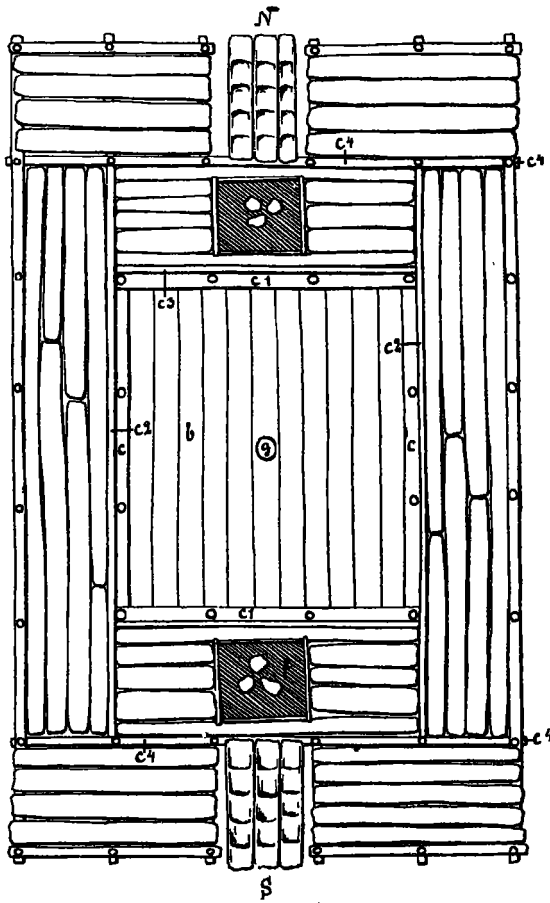
It measured 11.25 m. by 6.75 m.

In the plan (Fig. 185) we can follow the arrangement of the floor, the platforms, the fireplaces and the entrances.

*The floor planks* (Fig. 185 b) were placed in the longitudinal direction of the lobo, the plank in the middle being somewhat heavier than the rest and having in its center a ring, 6 or 7 cm. high, encircling the bottom of the center post.

*The floor frame* resembled that of the Kantewoe lobo, and to a certain extent that of the lobo of Poraelea, the outer frame not only consisting of 4 long planks, put





1:100.

Fig. 185. The temple of Mopali.

b: floor planks; c—c⁴: floor frame; f: fireplace; g: main post.

on edge (Fig. 185 c², c³), but also of a plank, placed between the outer and the inner gable platform (Fig. 185 c⁴), running from one side to the other. In this way the gable platforms were on a level with the long platforms.



Fig 186. Plank with carving, fastened to the center post; from the temple of Mopahi. (Doctor Kandern's collection.)

There were no *walls* outside the platforms, only a number of props, resting on a frame of long poles just as in the lobo of Lawe.

The two *fireplaces* were situated in the middle of the inner gable platforms (Fig. 185 f).

The *roof-truss* was made with less care than that of the Kantewoe lobo, but outside of that resembled it very much, having a center post coming up to the ridge. At the gables the ridge pole was supported in the same manner as in the Kantewoe lobo by a post, placed on the top of the upper plank frame of the platforms.

*The roofing* was of big shingles.

There were two *entrances* just as in a lobo of genuine Kantewoe type, but strange to say they were not placed at the long sides but in the middle of the gables, immediately in front of the fireplaces (Fig. 185). A person wanting to enter the lobo could hardly avoid stepping into the fireplace.

*The staircases* were made of some logs, originally 3 or 4 at each entrance, with some steps hewn out.

*The adornments* were very simple. I found the usual carved shingles at the bottom of the roof, but no carvings save a plank, tied to the center post (Fig. 186).

No other *movables* were to be seen but a great number of bamboo sticks with a brush of dry grass at the top, bound to the center post.

#### IV. The Lindoe type. Tomado.

The lobo of the long stretched village of Tomado is situated at the NW. side of the village road not quite at the outskirts. The gables do not here turn as usual toward the north and the south but toward the SE. and the NW. (76°).

It measures 6,9 m. by 6,5 m.

*The foundation* consists of logs in 3 layers, the bottom one holding 2, comparatively short but heavy logs (a<sup>1</sup> in Figs 187, 189, 190), placed crosswise to the structure, resting each on two stones, buried in the ground. Across these logs are placed 2 logs as big as those of the bottom layer but longer (a<sup>2</sup> in Figs 187—189), at the end of which is a small notch for the props (k in Figs 187, 188 C), supporting the frame at the bottom of the roof (d<sup>1</sup>, d<sup>2</sup> in Figs 188—190).

On the top of the long logs we have a layer of several slender poles or bars (a<sup>3</sup> in Figs 187—190), much longer than the logs of the bottom layer. They run from one side of the structure to the other. The 3 principal poles have at the ends a little hole for the props (k<sup>1</sup> in Figs 187—189) of the frame at the bottom of the roof. These poles or bars carry the floor (b in Figs 189, 190), the floor frame, and the bars, supporting the fireplaces (b<sup>1</sup> in Figs 187—189).

*The floor* is made of 12 planks, the one in the middle not heavier than the rest.

*The floor frame* is double. The inner frame is made of logs, flattened a bit at the bottom as well as on the top, the two at the long sides (c in Figs 187, 188 C, 189,

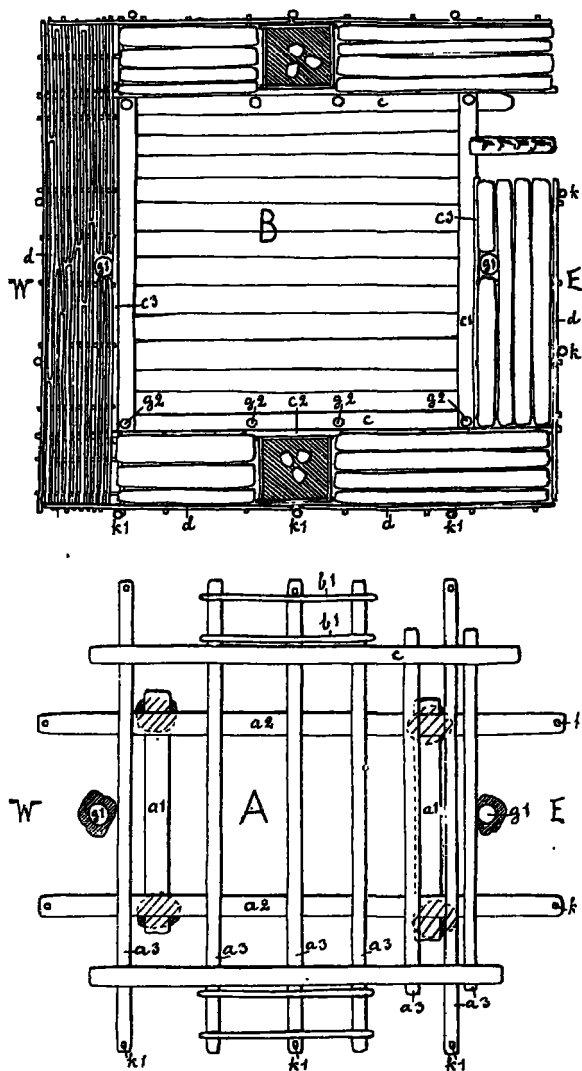


Fig. 187. The temple of Tomado.

$a^1$ — $a^3$ : foundation;  $b^1$ : bars, supporting the fireplace;  $c$ — $c^3$ : floor frame;  
 $d$ : walls;  $g^1$ ,  $g^2$ : roof-truss;  $k$ ,  $k^1$ : slanting props; supporting the edge of the  
 roof.

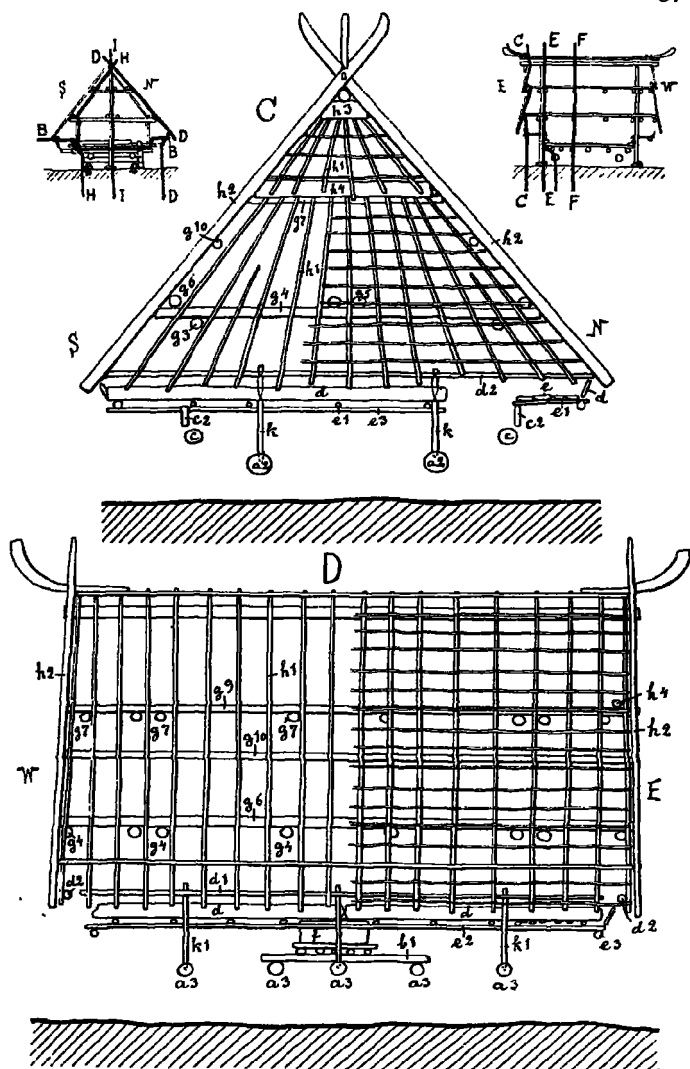
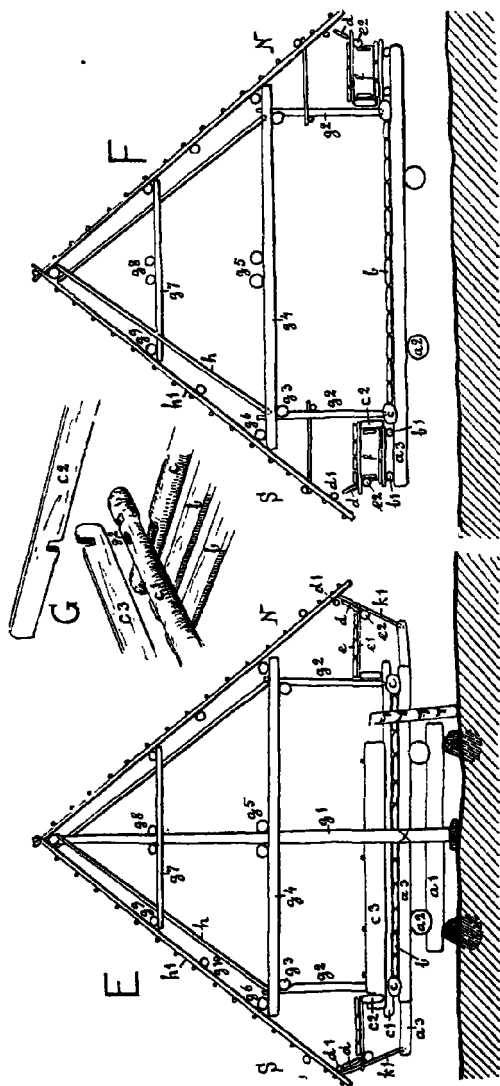


Fig. 188. The temple of Tomado.

a<sup>1</sup>, a<sup>2</sup>: foundation; b<sup>1</sup>: bars, supporting the fireplace; c, c<sup>2</sup>: floor frame; d: wall planks; d<sup>1</sup>, d<sup>2</sup>: frame at the bottom of the roof; e—e<sup>3</sup>: platforms; g<sup>1</sup>—g<sup>10</sup>: roof-truss; h<sup>1</sup>—h<sup>4</sup>: the roof; k, k<sup>1</sup>: props, supporting the edge of the roof. The miniature drawings show the place of the sections A—I



E. F. 1:100.

Fig. 189. The temple of Tomado.

a<sup>1</sup>-a<sup>2</sup>: foundation; b: floor planks; b<sup>1</sup>: bars, supporting the fireplaces; c-c<sup>2</sup>: floor frame; d: wall planks; d<sup>1</sup>: frame at the bottom of the roof; e-e<sup>2</sup>: platforms; f: fireplace; g<sup>1</sup>-g<sup>10</sup>: roof-truss; h, h<sup>1</sup>: rafters; k<sup>1</sup>: props, supporting the edge of the roof.

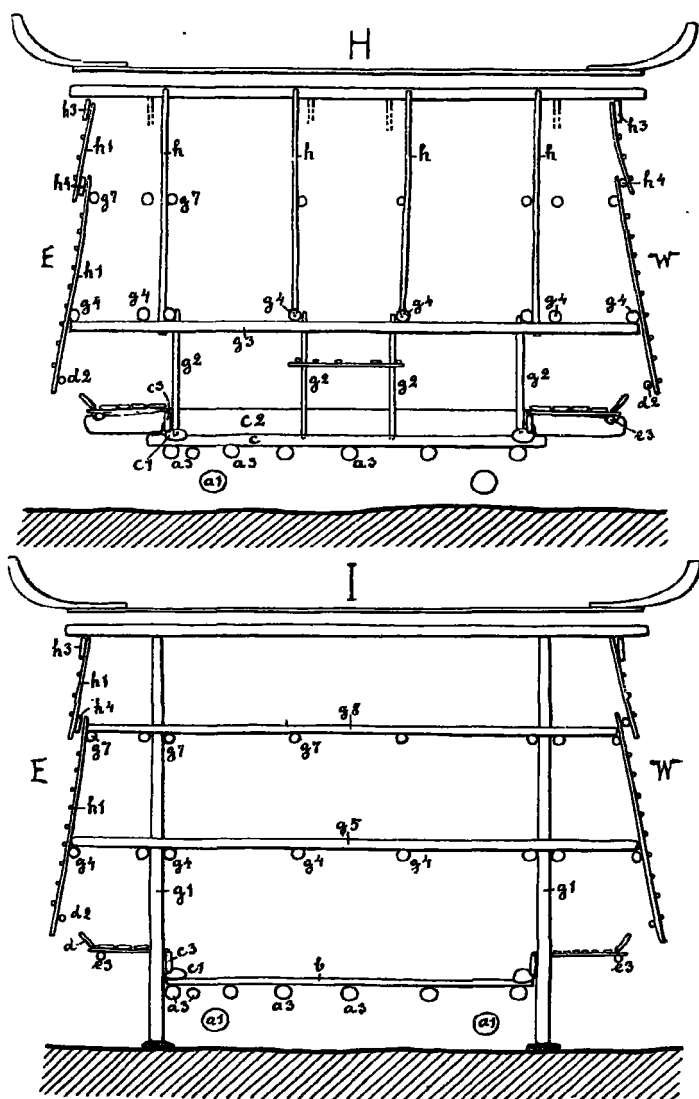


Fig. 190. The temple of Tomodo.

a<sup>1</sup>, a<sup>3</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d: wall planks; d<sup>2</sup>: frame at the bottom of the roof; e<sup>3</sup>: platforms; g<sup>1</sup>—g<sup>2</sup>: roof—truss; h—h<sup>4</sup>: roof.

190 H) close to the floor planks, the other two on the top of the planks ( $c^1$  in Figs 187, 189, 190).

The outer floor frame consists as usual of 4 planks, put on edge, resting on the inner floor frame. The two side planks ( $c^2$  in Figs 187—190) run from gable to gable, the other two planks are rather short ( $c^3$  in Figs 187, 189, 190). In figure 189 G we find how the different parts of the frames are joined.

The *platforms* are of the same breadth all round. The flooring of the long platforms as well as of the SE. gable was of common planks, on the NW. gable of pinang laths (Fig. 187), planks as well as laths resting on sticks, supported by the outer floor frame, and 4 bars ( $e^2$ ,  $e^3$  in Figs 188—190), fastened to the above mentioned props ( $k$ ,  $k^1$ ).

The platforms are bordered by a low *wall*, consisting of boards ( $d$  in Figs 187—190), tied to the props.

There are 2 *fireplaces* ( $f$ ), one in the middle of each long side. The construction is the usual one as can be seen in Figs 188 and 189 F.

The *roof-truss*. The ridge pole is supported by 2 posts, one at each gable, resting on flat stones on the ground ( $g^1$  in Figs 187, 189, 190). There is thus no center post, neither any special supports at the gables.

Along each side of the floor are raised 4 slightly pointed poles ( $g^2$  in Figs 187, 189, 190), to which is bound a long bar ( $g^3$  in Figs 188—190), running from gable to gable.

On the top of the two long bars we have a layer of 8 joists ( $g^4$  in Figs 188—190), one at each gable, one pair at each ridge pole and two in the middle, fastened to the upright poles.

On these joists are placed 4 long bars ( $g^5$ ,  $g^6$  in Figs 188—190), running from gable to gable, one pair in the middle, close to the ridge posts and an odd bar at the end of the joists.

Higher up there is another row of joists ( $g^7$  in Figs



188—190) and bars ( $g^a$ ,  $g^b$  in Figs 188—190) of the same number and arrangement as the ones below.

Besides there are 2 long bars, one at each side of the roof, between those resting on the joists ( $g^{10}$  in Figs 188, 189).

The rafters are fastened in the usual manner. At the gables they radiate, being placed in two rows, each covered at the top by a board ( $h^3$ ,  $h^4$  in Figs 188, 190). At the edge of the gables there are 2 long planks or boards ( $h^2$  in Fig. 188.) crossing on the top of the ridge pole, slightly shaped as a sickle.

Beside the real rafters, there are 4 pairs of inner rafters ( $h$  in Figs 189, 188), to a certain extent resembling the inner roof of a lobo of Koelawi type<sup>e</sup>, that is to say, they rest on the corresponding bars, but here they cross below the ridge pole.

Force ratan strips serve as battens.

*The roofing* is of big shingles.

In this lobo there is only one *entrance*, situated at the SE. gable, near the northern platform.

*The staircase* is a single log with steps hewn out.

There were almost no *adornments* in this lobo. Only a few shingles were carved in the shape of horns. The gable adornment I have already mentioned. Besides there was an odd board between the two boards, of the same shape as those.

There were no carvings inside and no *movables*.

## Antja.

In the village of Antja not far from Tomado there is a lobo of the same construction, but much smaller and less carefully built. When I visited the place the natives were celebrating the feast of the dead in the temple which prevented me from measuring and making it subject of a close study.



W. Kaudern Photo

Fig. 191. The temple of Langko in Lindoe.

## Langko.

This lobo resembles in all essential things that of Tomado. It is situated in the south-eastern part of the village with the gables toward the north and the south ( $7^{\circ}$ ).

It measures 7 m. by 6,30 m.

*The foundation* consists of logs in 5 layer, the 2 heavy bottom logs being placed crosswise to the structure as in the lobo of Tomado. Here however they are very long ( $a^1$  in Figs 192, 193, 195, 196), not resting on stones but on roughly hewn blocks of wood, placed on a layer of idjoek.

In the second layer there are 2 logs as heavy as those of the bottom layer but much shorter ( $a^2$  in Figs 192, 193, 195).

The 3 logs of the next layer are less heavy ( $a^3$  in Figs 193, 195).

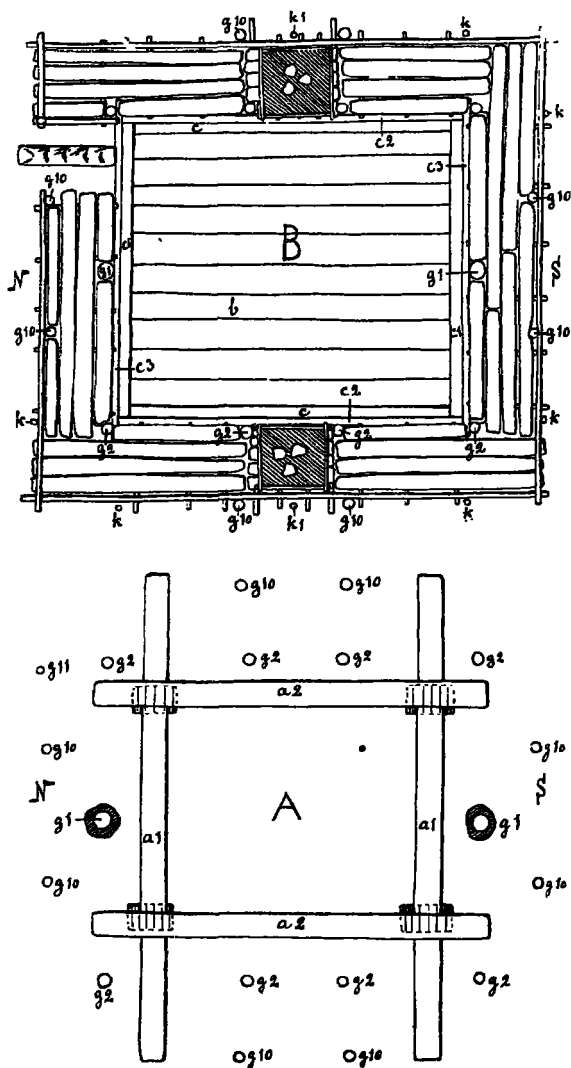


Fig. 192. The temple of Langko.

$a^1$ ,  $a^2$ : foundation;  $b$ : floor planks;  $c^1$ — $c^2$ : floor frame;  $g^1$ — $g^{10}$ : roof—truss;  
 $g^{11}$ : prop, supporting the platform at the entrance;  $k$ ,  $k^1$ : slanting props,  
 supporting the edge of the roof.

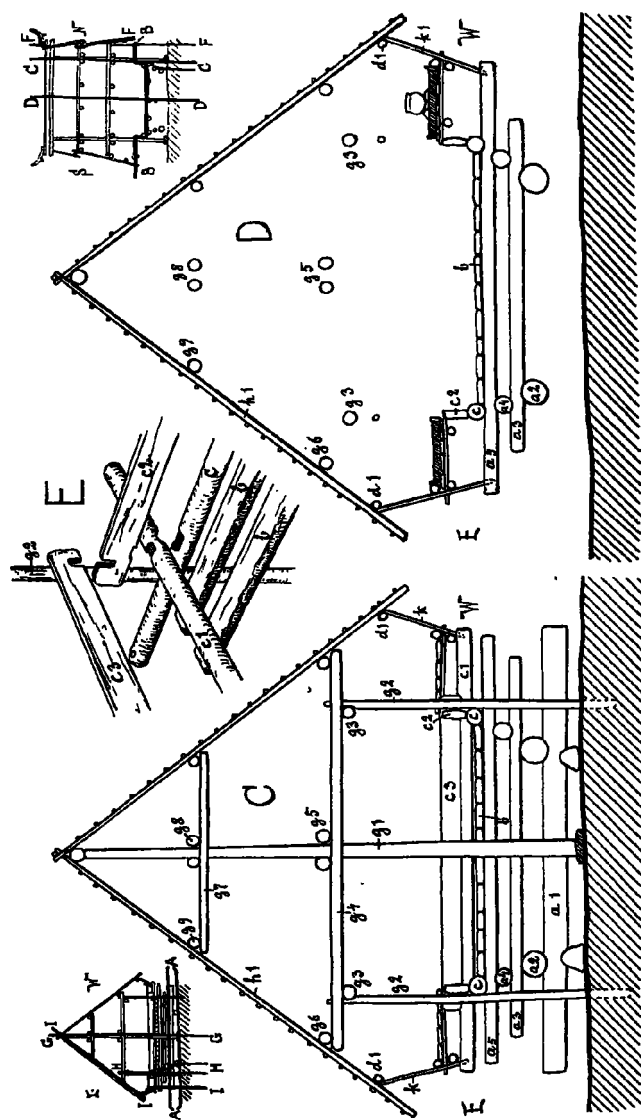
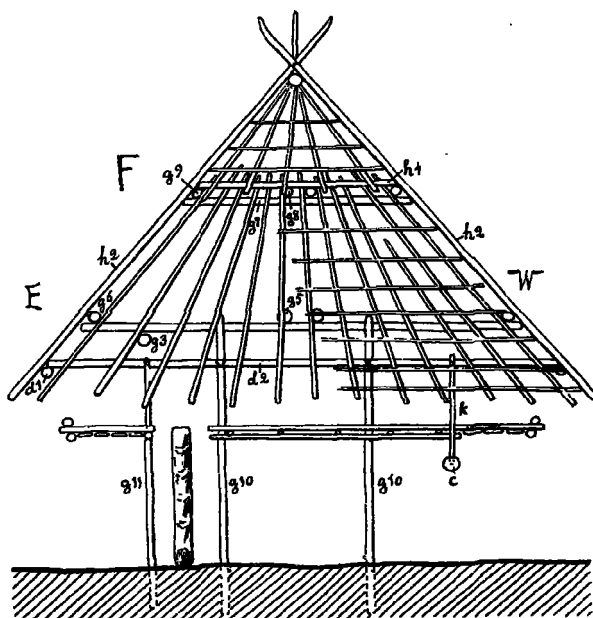


Fig. 193. The temple of Laugko.

a<sup>1</sup>—a<sup>5</sup>: foundation; b: floor planks; c—c': floor frame; d<sup>1</sup>: frame at the bottom of the roof; g<sup>1</sup>—g<sup>5</sup>: roof—truss; h': rafters; k, k': slanting props, supporting the edge of the roof. The miniature drawings show the place of the sections A—I.

Then there is a fourth layer, consisting of 2 logs, placed in the lengthwise direction of the lobo ( $a^4$  in Figs 193, 195).

The top layer counts 5 logs, the one in the middle as well as the two at the sides being longer than the rest ( $a^5$  in Figs



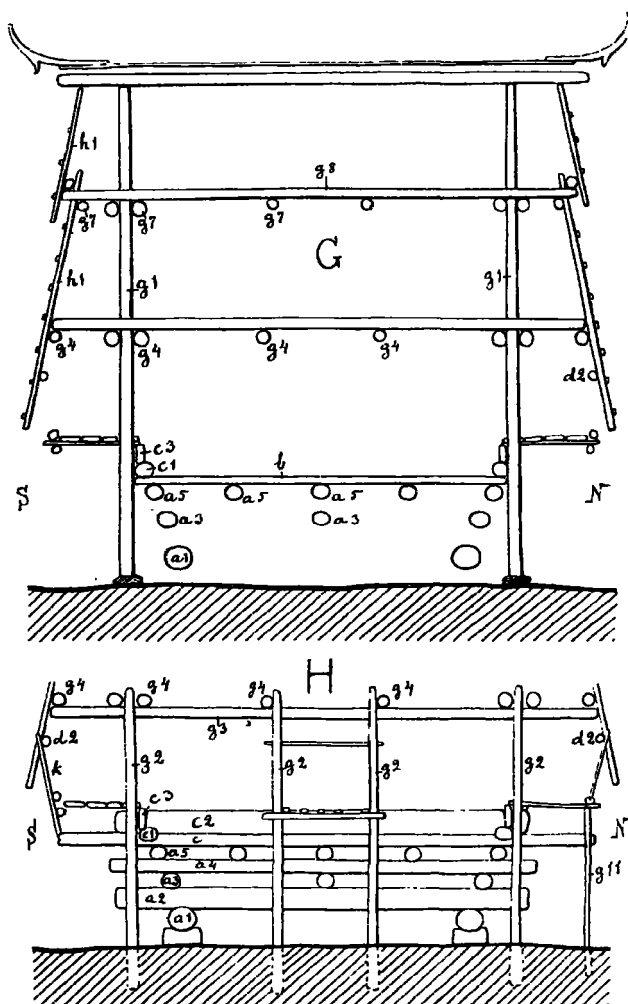
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Fig. 194. The temple of Langko.

c: floor frame;  $d^1$ ,  $d^2$ : frame at the bottom of the roof;  $g^2$ — $g^{10}$ : roof—truss;  $g^{11}$ : pole supporting the platform;  $h^2$ ,  $h^4$ : roof; k: slanting prop, supporting the roof's edge.

193, 195, 196), running almost from one side of the structure to the other, the two short ones not reaching beyond the floor frame. At the end of the middle log there is a notch to hold a prop ( $k^1$  in Figs 192, 193, 196), helping to support the roof. These 5 logs carry the floor planks and the floor frame.

The floor is as usual made of coarse planks none of which is bigger than the other.



1:100.

Fig. 195. The temple of Langko.

$a^1$ — $a^5$ : foundation;  $b$ : floor plank;  $c$ — $c^3$ : floor frame;  $d^1$ : frame at the bottom of the roof;  $g^1$ — $g^8$ : roof-truss;  $g^{11}$ : pole, supporting the platform;  $h^1$ : rafters;  $k$ : slanting props, supporting the edge of the roof;

The floor frame is double, the inner frame made of 4 logs, running from gable to gable and from side to side (c, c<sup>1</sup> in Figs 192—196). At the end they carry a prop (k in Figs 192—196) helping to support the bar at the bottom of the roof. Outside the inner frame but still resting on it,

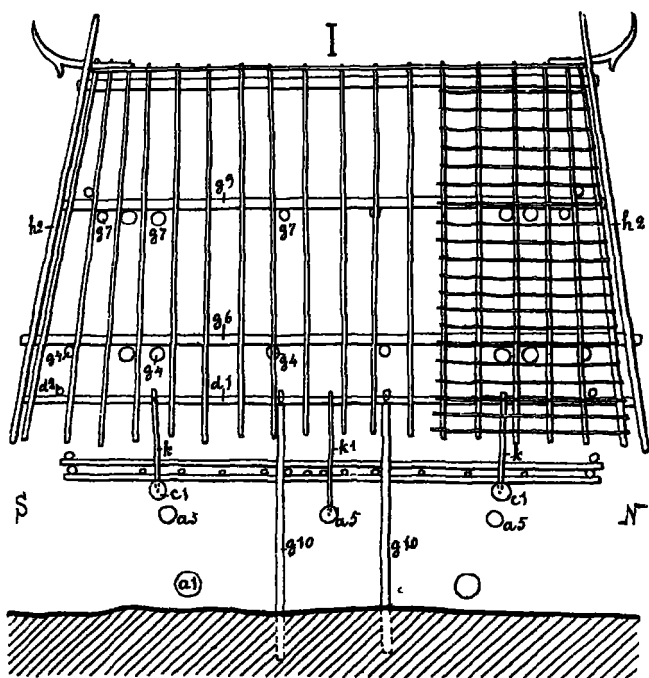


Fig. 196. The temple of Langko.

1:100.

a<sup>1</sup>, a<sup>2</sup>: foundation; c<sup>1</sup>: floor frame; d<sup>1</sup>, d<sup>2</sup>: frame at the bottom of the roof. h<sup>2</sup>: outermost rafters; k, k<sup>1</sup>: slanting props, supporting the edge of the roof;

there is the usual outer and upper floor frame, consisting of 4 planks put on edge (c<sup>2</sup> c<sup>3</sup> in Figs 192, 193, 195), being much shorter than the logs of the inner frame. How the planks and logs are joined can be seen in Fig. 193 F.

The platforms resemble those of the lobo of Tomado. The only difference is that the flooring is here of planks



all round the lobo. The platforms are quite open, having no walls at all.

There are 2 *fireplaces*, situated as in the Tomado lobo in the middle of the long platforms. They are shallow boxes the bottom of which is almost on a level with the floor of the platform.

All the poles, supporting the roof, rest on the ground or in it. They are placed round the floor ( $g^2$  in Figs 192, 193, 195) as well as round the platforms ( $g^{10}$  in Figs 192, 194, 196), those round the floor being one at each corner, 2 at each long side and one at each short side, the latter being 2 posts ( $g^1$  in Figs 192, 193, 195), supporting the ridge bar. The posts rest on flat stones on the ground. All other poles round the floor and round the platforms are driven into the ground.

The poles outside the platforms are 2 at each side. Besides there is a short pole ( $g^{11}$  in Figs 192, 194, 195) at the entrance, helping to support the platform.

The poles round the platforms support a bar at the bottom of the roof ( $d^1$ ,  $d^2$  in Figs 193—196), those round the floor carry 2 long bars ( $g^3$  in Figs 193—195), supporting joists and long bars of the same number as in the lobo of Tomado and arranged in the same manner as can be followed in Figs 193—196.

The rafters at the sides as well as at the gables, the roofing and the battens, all are like those of the Tomado lobo. At the gables we only miss the horizontal planks found in the temple of Tomado.

There is only one *entrance*, placed at the northern gable close to the long platform of the eastern side.

The *adornment* was just as simple as in the above mentioned lobo.

There were no *movables* in the lobo save a big gong of copper, hanging down at the western fireplace.



W. Kaudern Photo.

Fig. 34. The temple of Towoeloe in Tobakoe.

## V. The Towoeloe type.

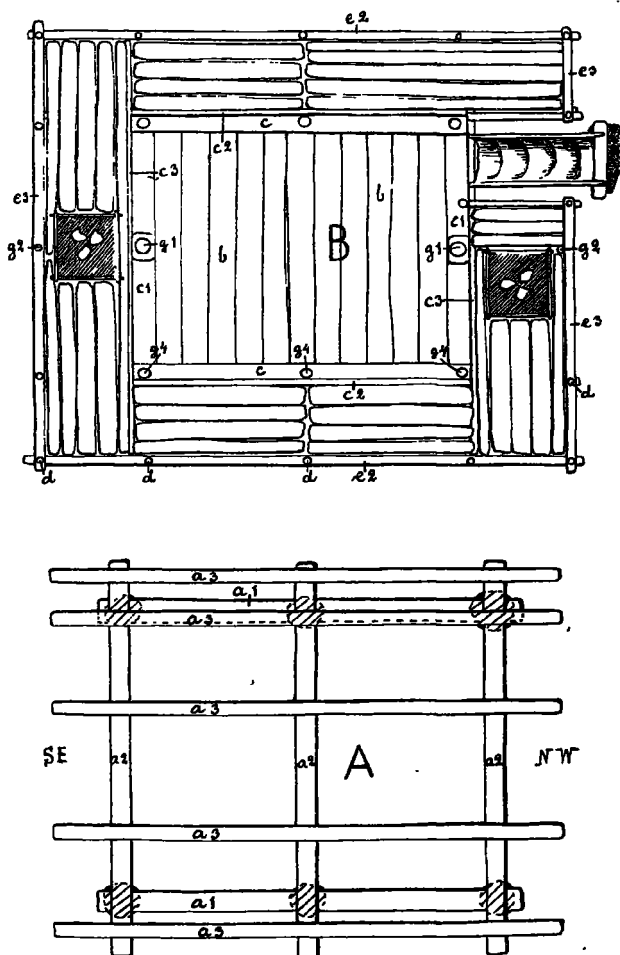
### Towoeloe.

The temples in the villages of Tobakoe, situated north of the Koro, are in some respects different to all other temples which I have described. For this reason I have classed them in my table as a special type, called the Towoeloe type, the temple of the village of Towoeloe being the one best preserved among these temples. Their native name is not lobo but *sooe eo*. (Sooe means house, eo day.)

The sooe eo of Towoeloe is situated in the NW. corner of the village with its gables turned toward the NW. and the SE. (50°).

It measures 7,5 m. by 6,5 m.

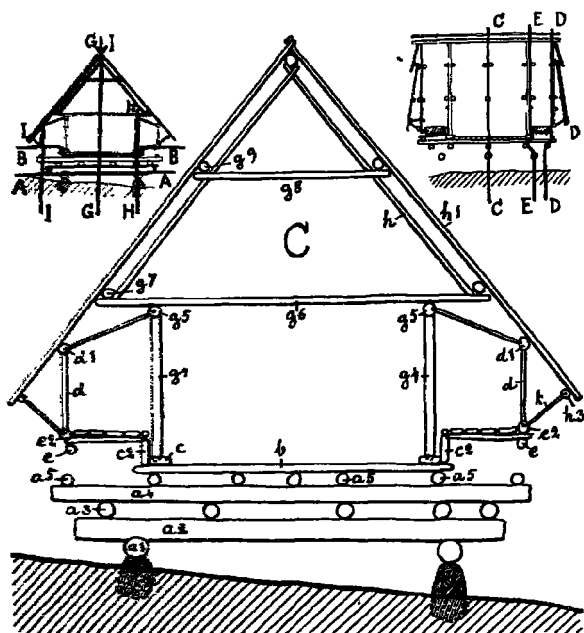
The foundation consists of logs in 5 layers. At the



1:100.

Fig. 198: The temple of Towoeloe.  
 a<sup>1</sup>—a<sup>3</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d: poles, be-  
 longing to the walls; e<sup>2</sup>, e<sup>3</sup>: frame of the platforms; g<sup>1</sup>—g<sup>4</sup>: roof—truss.

bottom there are only 2 heavy logs, placed in the longitudinal direction of the house, each ( $a^1$  in Figs 198—201). stones, partly buried in the ground log resting on three On account of the slope of the ground one of the logs



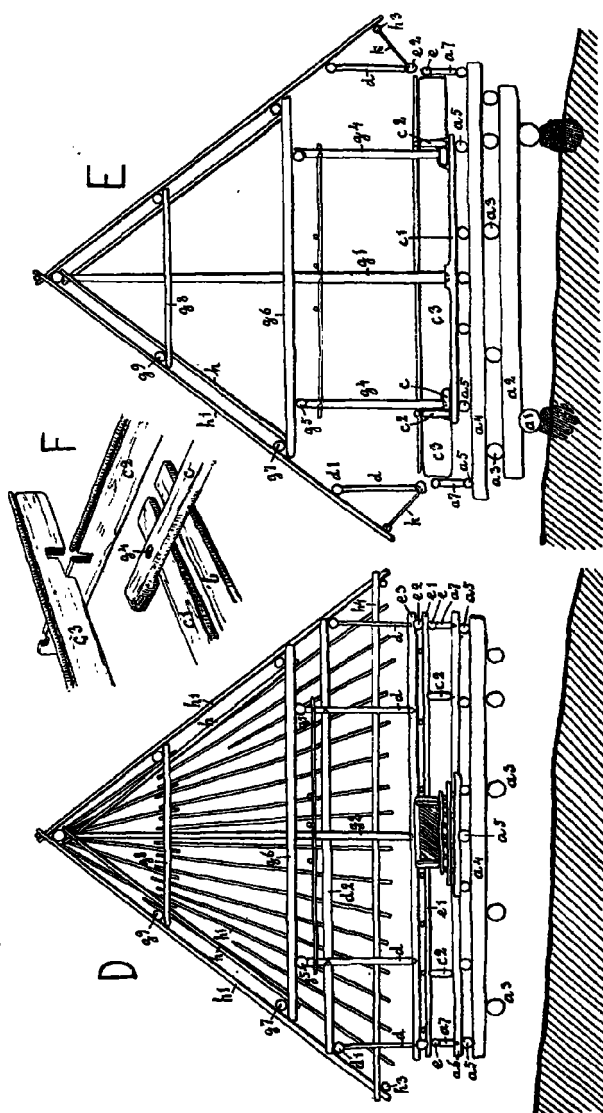
C. 1100

Fig. 199 The temple of Towocloc.

$a^1$ — $a^2$ : foundation;  $b$ : floor plank;  $c$ ,  $c^2$ : floor frame;  $d$ : pole, belonging to the walls;  $d^1$ : upper wall frame;  $e$ ,  $e^2$ : platforms;  $g^1$ — $g^2$ : roof—truss;  $h$ — $h^2$ : roof;  $k$ : slanting props, supporting the edge of the roof. The miniature drawings show the place of the sections A—I.

at the north side is supported by a short prop ( $a$  in Fig. 201 H), resting on a flat stone.

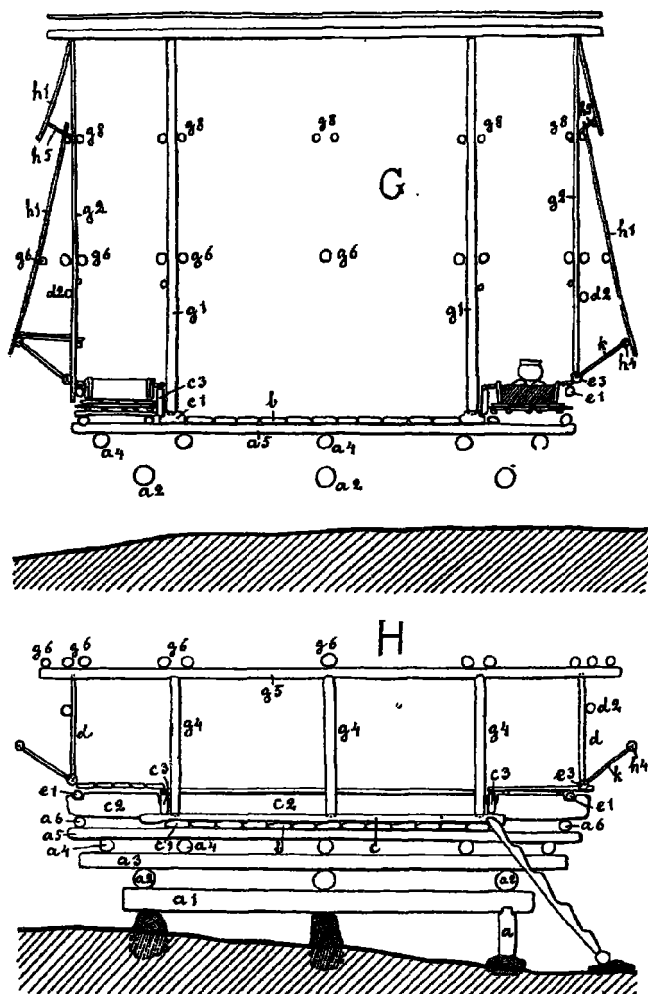
In the second layer there are 3 heavy logs ( $a^2$  in Figs 198—201), carrying a layer of 5 logs ( $a^3$  in Figs 198—201), less heavy than those of the layers below. The 4<sup>th</sup> layer consists of 5 logs ( $a^4$  in Figs 199—202), running from one



D. E. 1:100.

Fig. 200. The temple of Towoeloe.

$a^1$ — $a^7$ : foundation;  $e^1$ — $e^7$ : floor frame;  $d^1$ : poles, belonging to the walls;  $h^1$ : rafters;  $h^2$ : frame at the bottom of the roof;  $g^1$ — $g^7$ : roof — truss;  $h^1$ : rafters;  $h^2$ : frame at the bottom of the roof;  $k$ : props, supporting the edge of the roof.



1:100.

Fig. 201. The temple of Towoeloc.

a— $a^6$ : foundation; b: floor planks; c— $c^3$ : floor frame; d: pole, belonging to the walls;  $c^1$ ,  $c^3$ : platforms;  $g^1$ — $g^6$ : roof—truss;  $h^1$ : rafters;  $h^2$ : frame at the bottom of the roof;  $h^3$ : props, supporting the edge of the upper gable rafters.

side of the structure to the other. In the top layer ( $a^5$ ) we find 7 slender poles, running between the gables. The side poles carry a number of short props ( $a^7$  in Figs 200, 202), supporting a bar at the bottom of the long platforms ( $e$ , in Figs 199, 200, 202), the 5 poles between them carry the floor planks and the floor frame.

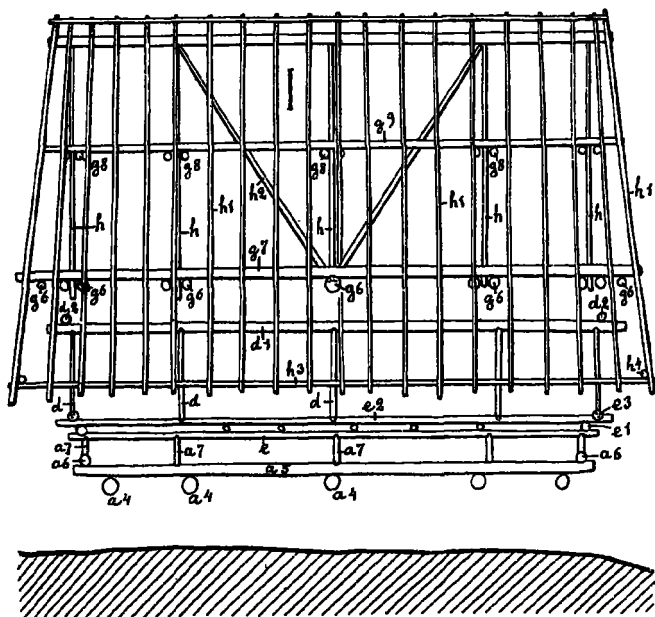


Fig. 202. The temple of Towoeloe.

1:100.

$a^1$ — $a^7$ : foundation;  $d$ : poles, belonging to the walls;  $d^1$ ,  $d^2$ : wall frame;  $e$ — $c^3$ : platforms;  $g^6$ — $g^9$ : roof—truss;  $h$ — $h^2$ : rafters,  $h^3$ ,  $l^4$ : frame at the bottom of the roof.

The floor planks are thus parallel to the gables. There is no special center plank, but the outermost planks ( $c^1$  in Figs 198, 200, 201) are rather heavy, having each a small swell on which is raised a main post ( $g^1$  in Figs 198, 200, 201), carrying the ridge pole. Consequently we must consider these two planks as part of an inner floor frame. The other sides of this frame are 2 planks ( $c$  in Figs 198

—201) at the corners projecting somewhat beyond the other planks.

The outer floor frame is as usual made of 4 planks put on edge. The ones parallel to the gables nearly run from one side of the structure to the other (c<sup>3</sup> in Figs 198, 200, 201), the other two running from gable to gable, help to support the gable platforms (c<sup>2</sup> in Figs 198—201). How the planks of the floor frames are joined can be seen in Fig. 200 F.

The platforms are of the same width all round the temple. The flooring, being of planks, is supported in the usual manner by sticks, resting on the outer floor frame. Outside they are supported by a frame of slender bars (e, e<sup>1</sup> in Figs 199—202), placed on short props at the long sides standing on the outermost poles of the top layer (a<sup>3</sup>) of the foundation, at the gables on a bar (a<sup>6</sup>), placed on the poles.

The platforms are only bordered by a frame of heavy bars on the top of the sticks (e<sup>2</sup> e<sup>3</sup> in Figs 198—202). There are no walls. From the frame only rise a number of pointed sticks (d, in Figs 198—202), fitting in holes in an upper frame of round bars (d<sup>1</sup> d<sup>2</sup> in Figs 199—202), at the corners tied together by means of ratan strips.

There are 2 *fireplaces*, one at each gable, made as boxes, resting on a foundation of some layers of sticks (Fig. 200 D, 201 G).

The *roof-truss*. On the long planks of the inner floor frame are raised 6 poles (g<sup>4</sup> in Figs 198—201), 3 at each side, carrying a long heavy bar (g<sup>5</sup> in Figs 199—201), running from gable to gable. At the gables it is supported by the pole d (Figs 200 D, 201 H), resting on the bar which forms the outer border of the platform.

On the top of the 2 long bars are placed as joists 11 bars, (g<sup>6</sup> in Figs 199—202) an odd bar in the middle and at each gable. The remaining 8 joists are placed in pairs, one pair at each pole, supporting the ridge bar. Beside



the 2 poles already mentioned, the ridge bar is supported by 2 slender poles ( $g^2$  in Figs 198, 200, 201), one at each gable, the one at the SE. gable resting in the bar of the platform, that of the NE. gable only tied to this frame.

At the end of the joists there is at each side a long bar ( $g^7$  in Figs 199, 200, 202) to which the rafters are fastened.

There is a second row of joists ( $g^8$ ,  $g^9$  in Figs 199—202) and long bars, arranged in the same manner as those below. The only difference is that there is no odd joist in the middle but a pair of joists.

At the bottom of the roof there is a frame of slender bars ( $h^3$ ,  $h^4$  in Figs 199—202), supported by a number of slanting props ( $k$  in Figs 199—201), resting in the frame, bordering the platforms.

Beside the proper rafters there are 5 pairs of inner rafters ( $h$  in Figs 199, 200, 202), fastened to the long bars inside the roof, crossing below the ridge pole.

The ridge is made in the usual manner, and the rafters tied to the long bars, supported by the joists. The rafters of the gables are placed in two stories as in most temples, but here the ones at the top project rather much beyond the gable, being kept in place by means of some small props ( $h^5$  in Fig. 201 G).

*The roofing* is here only of common atap, at the ridge strengthened by a layer of idjoek.

There is only one *entrance*, placed in the NW. gable, close to the SW. platform.

*The staircase* is a heavy log with some steps hewn out, resting on a log which is placed on the top of some stones (Figs 198 B, 201 H).

There is no kind of *adornment* in this temple. At the time of my visit it was casually decorated with palm leaves, like fringes fastened outside the platforms as can be seen in the representation of the temple.

There are no *movables* in this temple.



W. Kaudern Photo

Fig. 203. The temple of Tipe in Tobakoe.

## Tipe.

The temple of Tipe is situated in the eastern part of the village (Fig. 204) with its gables towards the N E. and the S W. (335°).

It measures 7,2 m. by 6 m.

The construction of this sooe eo is in all essential things the same as that of the temple of Towoeloe.

*The foundation* consists here only of a number of logs in 3 layers. The 2 logs at the bottom rest on 2 stones instead of 3 in the Towoeloe temple. In the second layer there are

4 logs and in the top layer, running in the lengthwise direction, 5 logs. In the western corner, the outermost log has been shortened (Fig. 205 A, 206 C) to give place to the entrance.

The floor, the floor frame, the platforms, the fireplaces, the roof-truss, the rafters and the roofing are made almost exactly in the same manner as in the sooe eo of Towoeloe. The small difference can easily be seen if we compare the



Fig. 204.

Plan of the village of  
Tipe in Tobakoe. The  
small rings represent  
coco-nut palms.

figures of the two temples. The fireplaces for instance have no high foundation of sticks in several layers, depending on the construction of the foundation. The planks of the outer floor frame are not joined quite in the same manner as in the previous temple as can be seen in Figs 200 F, 208 L. The entrance is situated at the N W. side, close to the platform of the S W. gable.

Contrary to the sooe eo of Towoeloe the Tipe temple has some ornaments. As we see in Figs 206 D, E, 208 M, N, P, the props (a 7) supporting the platforms are nicely

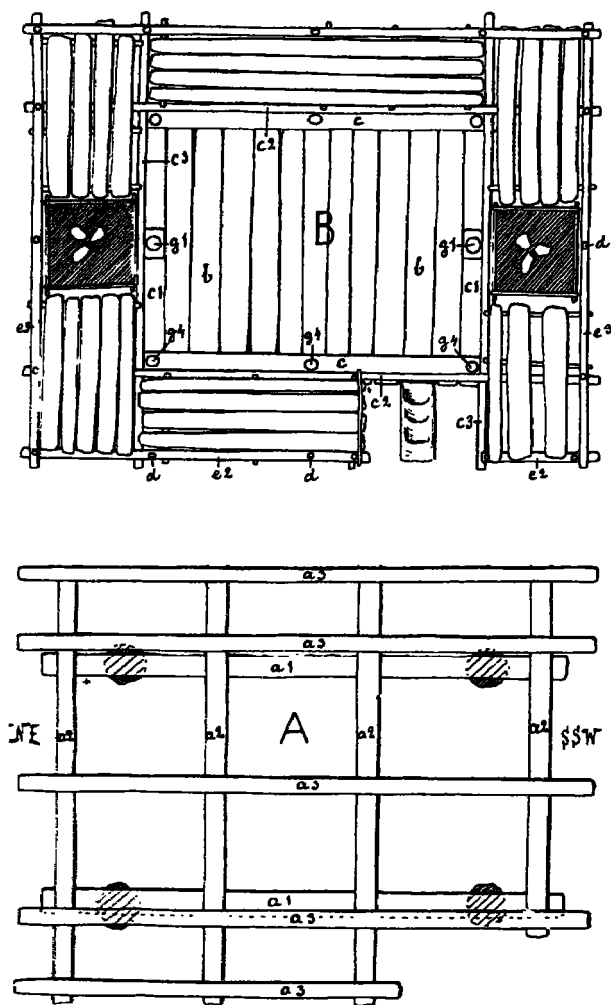
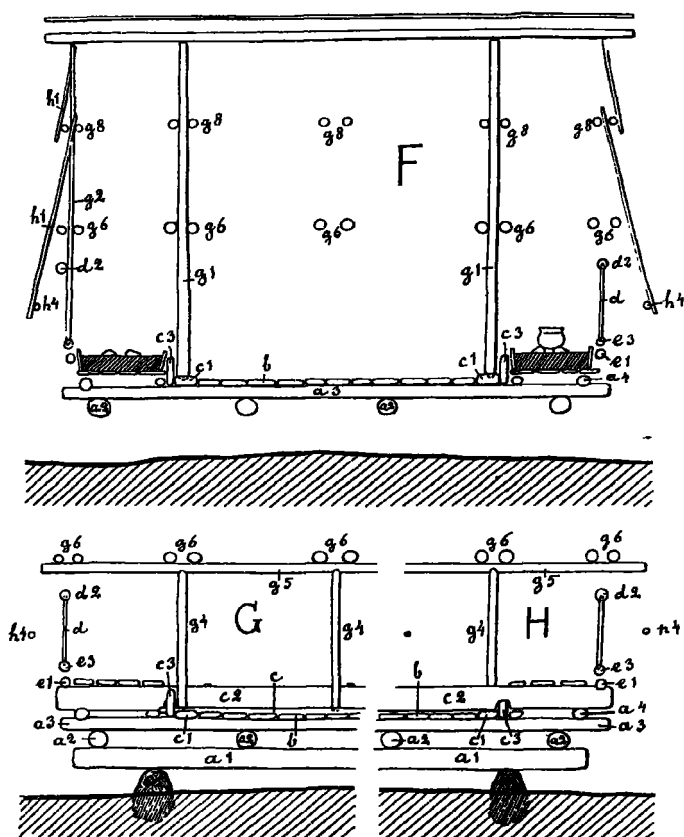


Fig. 205. The temple of Tipe.

1:100.

-a<sup>2</sup>: foundation; b: floor planks; c-c<sup>3</sup>: floor frame; d: poles, belonging to the walls; e<sup>2</sup>, e<sup>3</sup>: frame of the platforms; g<sup>1</sup>, g<sup>3</sup>: roof-truss.





1:100.

Fig. 207. The temple of Típe.

a<sup>1</sup>—a<sup>4</sup>: foundation; b: floor planks; c—c<sup>3</sup> floor frame; d: poles, belonging to the walls; d<sup>2</sup>: wall frame; e<sup>1</sup>, e<sup>2</sup>: frames of the platforms; g<sup>1</sup>—g<sup>4</sup>: roof—truss; h<sup>1</sup>: rafters; h<sup>2</sup>: frame at the bottom of the roof.

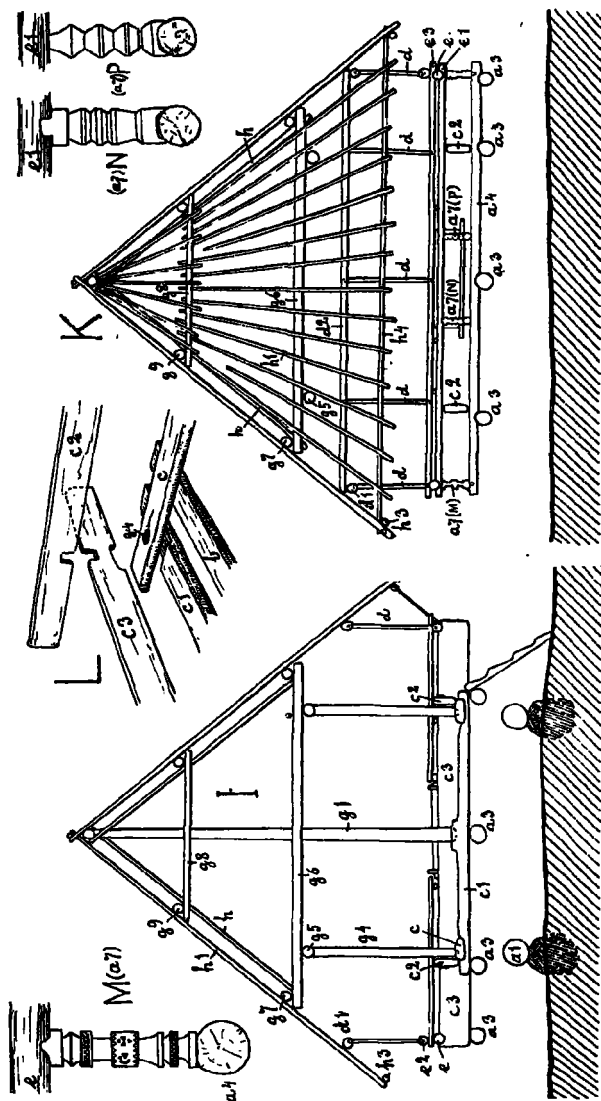


Fig. 208 The temple of Tife.

a<sup>1</sup>-a<sup>7</sup>: foundation; b: floor plank; c-e<sup>3</sup>: floor frame; d<sup>1</sup>, d<sup>2</sup>: wall frame; e-e<sup>3</sup>: frames of the platform; g<sup>1</sup>-g<sup>7</sup>: roof-truss; h, h<sup>1</sup>: poles; h<sup>2</sup>: rafters; h<sup>3</sup>, h<sup>4</sup>: frame axth bottom of the roof.

I. K. 1:100. M. N. P. 1:20.

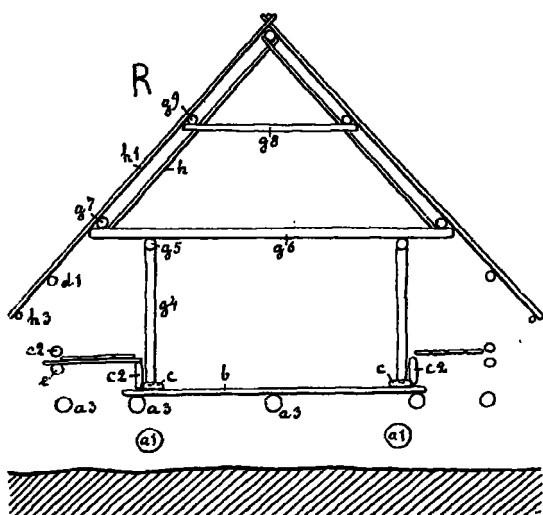


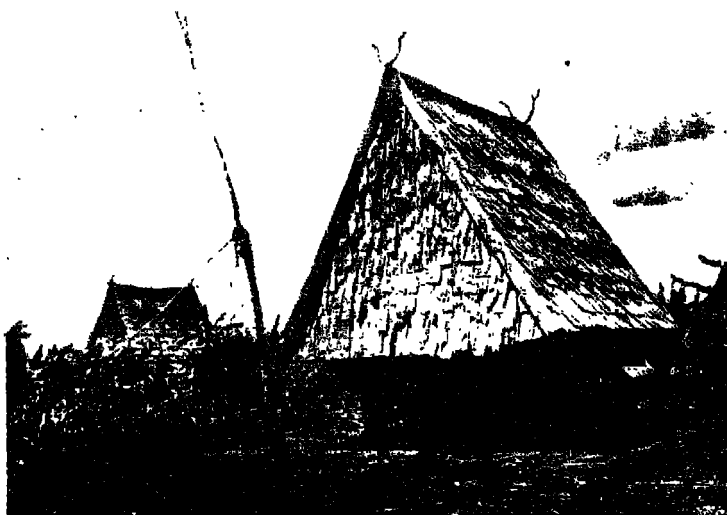
Fig. 209. The temple of Tipe.

a<sup>1</sup>, a<sup>2</sup>: foundation; b: floor plank; c, c<sup>2</sup>: floor frame; d<sup>1</sup>: wall frame;  
e, e<sup>2</sup>: frames of the platforms; g<sup>1</sup>—g<sup>3</sup>: roof—truss; h, h<sup>1</sup>: rafters; h<sup>2</sup>: frame  
at the bottom of the roof.

carved. But there were not many of them left, the temple being in a state of decay.

There were no *movables* to be seen but a small drum with hide only at one side.





W. Kaudern Photo.

Fig. 210. The temple of Doda, seen from the south.

## VI. The Bada—Behoa type. Doda.

The construction of this lobo is quite different to that of the previous lobos. To judge from the exterior, all the lobos still remaining in the districts of Bada and Behoa are built in the same way. I had, however, only the opportunity of making the Doda lobo subject of a close study.

The lobo of Doda is situated in the center of the village with the gables very nearly toward the north and the south. Unfortunately the note concerning the deviation of the compass has been lost. Consequently I cannot give an exact account of the location.

It measures 9 m. by 7 m.

*The foundation* is made of logs, crossing each other, not

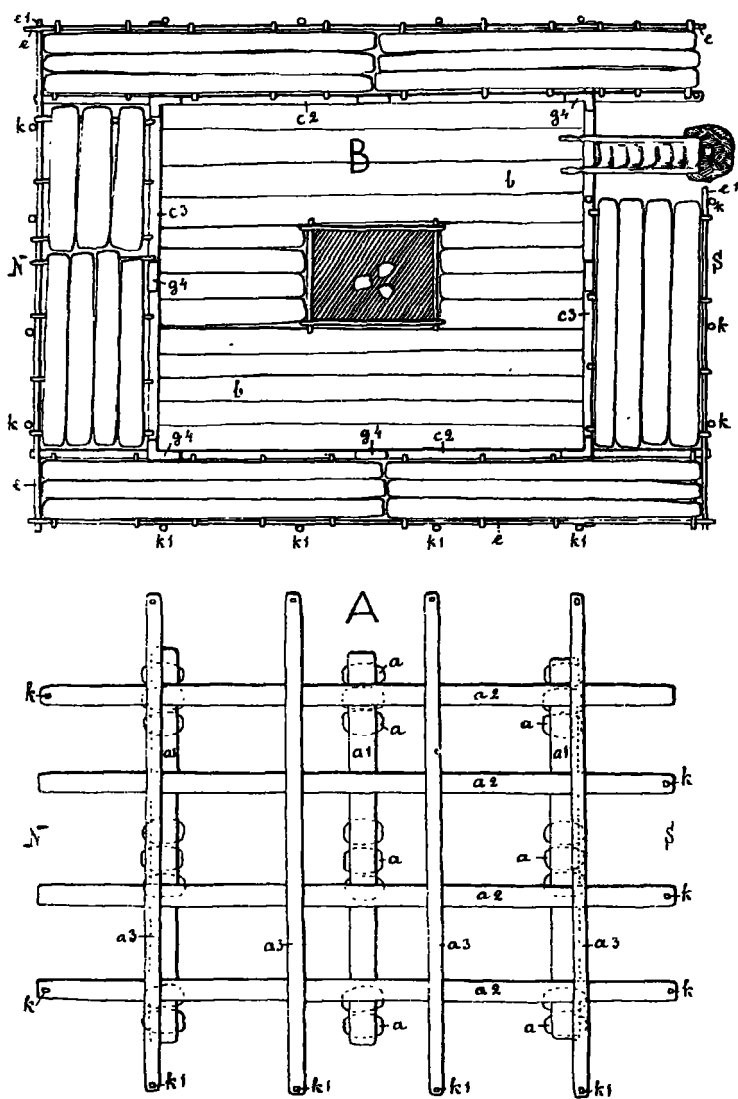
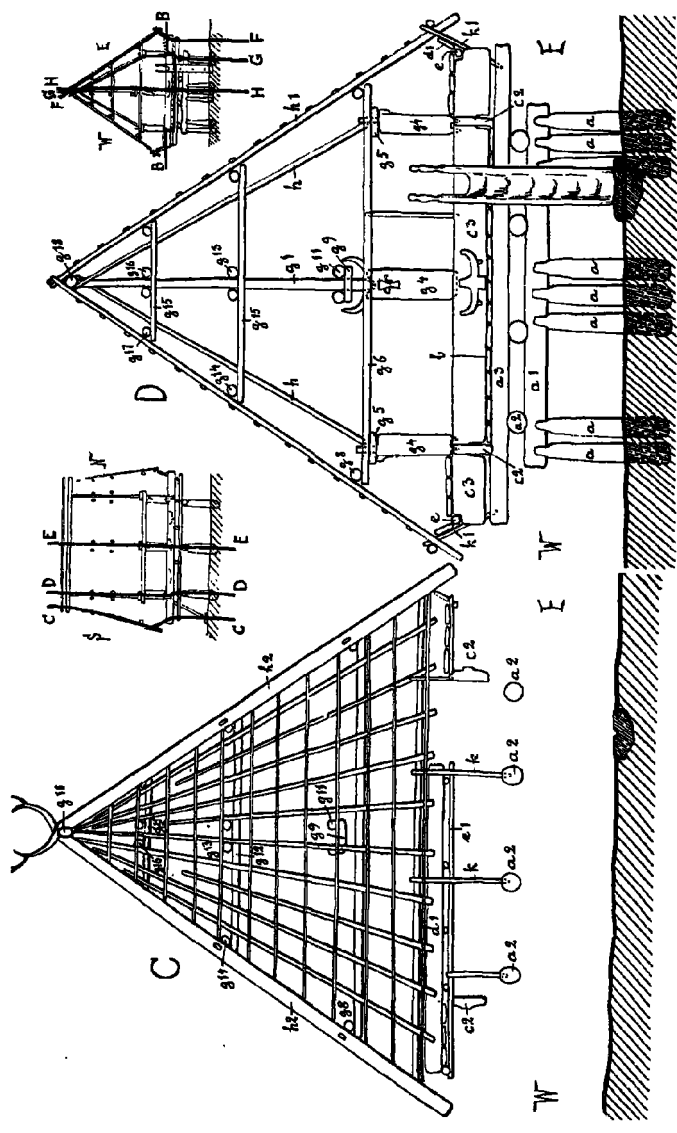


Fig. 211. The temple of Doda.

a— $a^3$ : foundation; b: floor planks;  $c^2$ ,  $c^3$ : floor frame; e,  $e^1$ : frame of the platforms;  $g^1$ : roof-truss; k,  $k^1$ : slanting props, supporting the edge of the roof.

1:100.



a---a': foundation; b: floor planks; c<sup>a</sup>, c<sup>b</sup>: floor frame; d<sup>p</sup>: wall board; e, e': frame of the platform; g<sup>a</sup>---g<sup>b</sup>: roof-truss; h---h': rafters; k, k': slanting props, supporting the edge of the roof. The miniature drawings show the place of the sections A---H.

resting on stones but on a number of heavy upright logs, driven into the ground (a in Figs 211—213, 215, 216). The logs are placed in groups of 2 or 3 as can be seen in Figs

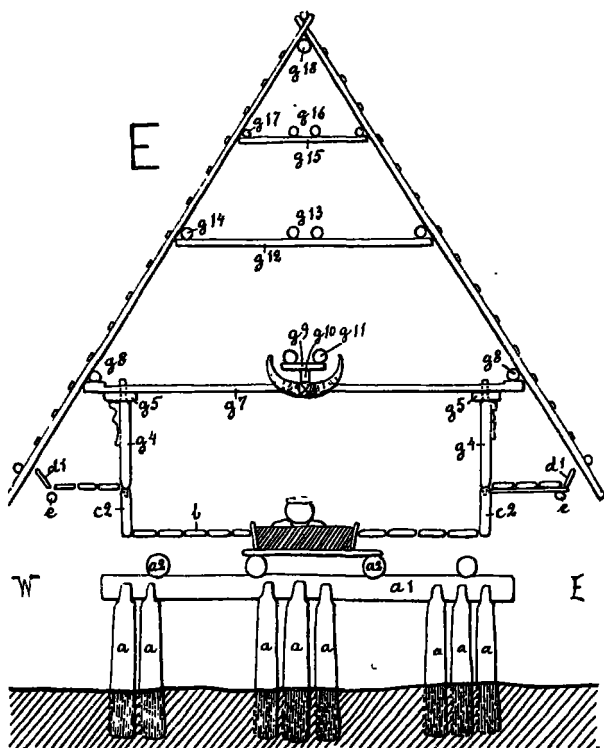


Fig. 213. The temple of Doda.

a—a<sup>2</sup>: foundation; b: floor planks; c<sup>2</sup>: floor frame; d<sup>1</sup>: wall plank; e: frame of the platform; g<sup>1</sup>—g<sup>18</sup>: roof—truss.

211 A—213. [They are all forked at the top. In the crotches 3 heavy logs are pushed down (a<sup>1</sup> in Figs 211—213, 215, 216), each log being supported by 8 poles.

On these 3 logs is a layer of 4 rather heavy logs, running from gable to gable (a<sup>2</sup> in Figs 211—213, 215), some of them

carrying at the ends slanting props (k in Figs 211, 212, 215), supporting a bar at the bottom of the roof.

The next layer contains 4 heavy planks or beams ( $a^3$  in Figs 211, 212, 214—216), running from one side of the struc-

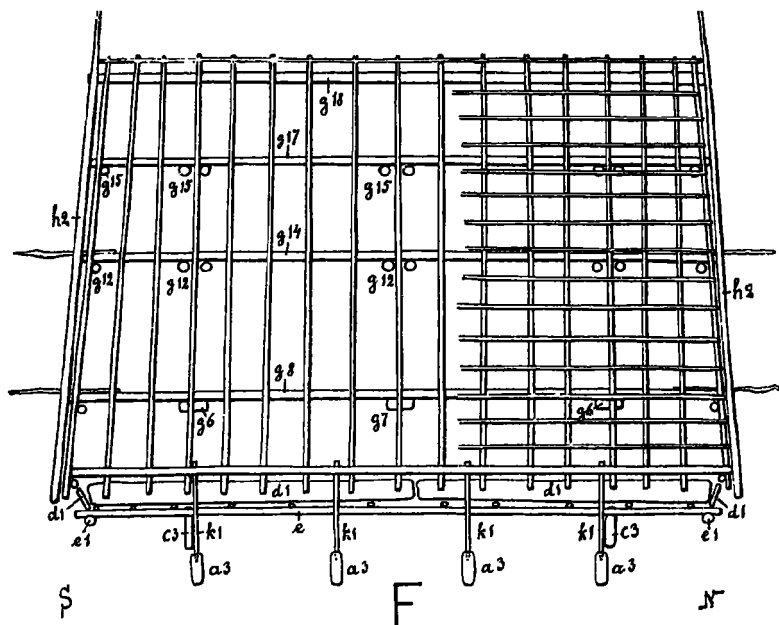


Fig. 214. The temple of Doda.

1:100.

$a^1$ : foundation;  $c^3$ : floor frame;  $d^1$ : wall planks;  $e, e^1$ : frame of the platforms;  $g^6$ — $g^{18}$ : roof—truss;  $h^2$ : outermost rafters;  $k^1$ : props, supporting the edge of the roof.

ture to the other, having at the ends slanting props ( $k^1$  in Figs 211, 212, 214), like those of the gables. These beams carry the floor planks and the floor frame. The 2 middle logs of the layer below support the fireplace (Fig. 213).

The floor planks, running parallel to the sides, leave

an open space in the center of the lobo where we find the fireplace (Fig. 211).

The floor frame consists here of 4 very broad planks (60 cm.), put on edge, corresponding to the outer floor frame

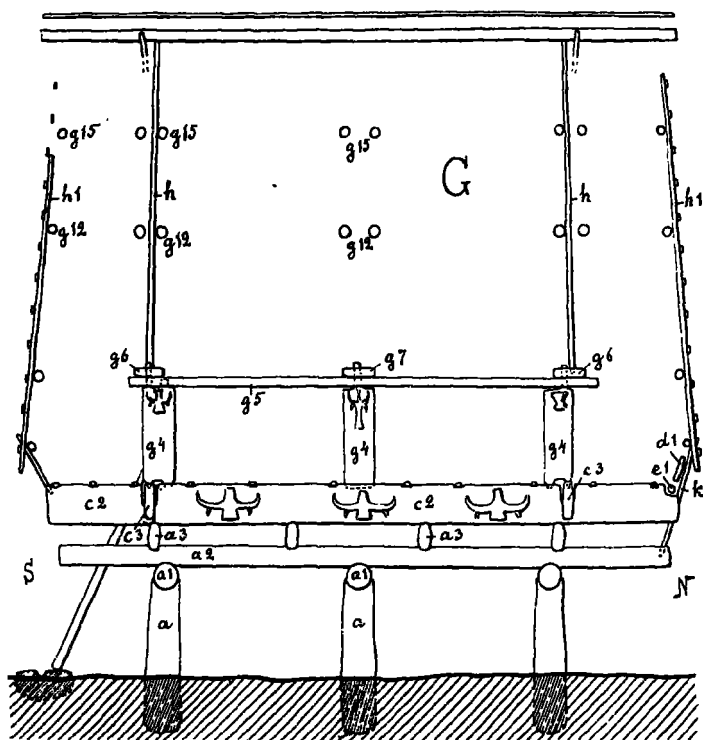


Fig. 215. The temple of Doda.

a— $a^1$ : foundation;  $c^2$ — $c^3$ : floor frame;  $d^1$ : wall plank;  $e^1$ : frame of the platforms;  $g^4$ — $g^{15}$ : roof truss; h,  $h^1$ : rafters; k: slanting props, supporting the edge of the roof.

of the previous lobos  $c^2$ ,  $c^3$  in Figs 211—216). They run from one gable to the other and from side to side, carrying a frame of 4 bars. ( $e$ ,  $e^1$  in Figs 211—216), forming the lower frame of the platforms.

The platforms are of the usual appearance with a flooring

of planks, resting on sticks, supported by the floor frame and the lower frame of the platforms (e, e<sup>1</sup>). They are bordered by planks (d<sup>1</sup> in Figs 212—216), put on edge,

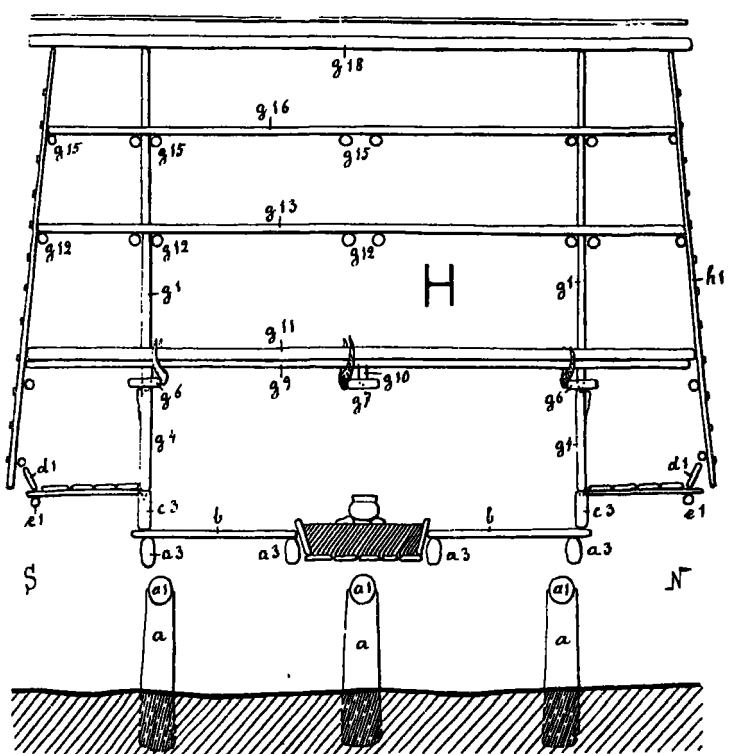


Fig. 216. The temple of Doda.

1:100.

a, a<sup>1</sup>: foundation; b: floor planks; c<sup>3</sup>: floor frame; d<sup>1</sup>: wall plank; e<sup>1</sup>: frame of the platforms; g<sup>4</sup>—g<sup>18</sup>: roof truss; h<sup>1</sup>: rafter.

bound to the props, supporting the bar at the bottom of the roof.

There is only one *fireplace* in the center of the structure made in the usual manner as a box, here supported as I have already mentioned by the logs of the 2:nd layer of the foundation.

*The rooftruss.* On the floor frame are raised 8 poles or pillars, one at each corner and one at each side ( $g^1$  in Figs 211—213, 215, 216), the poles of the corners being hewn in the shape of an angle, those at the sides more like rather large planks. The pillars at the corners have at the bottom taps, fitting in the plank below, the other planks have their whole edge pushed down in the plank (Fig. 212 D, 215). The pillars as well as the planks end in a tap, fitting in a frame of 4 planks ( $g^5$ ,  $g^6$  in Figs 212 D, 213—216). Besides there is in the center a plank ( $g^7$  in Figs 213—216) parallel to the gable planks. At the end of these 3 planks there is at each side a long bar ( $g^8$  in Figs 212—214), supporting the rafters.

In the center of the gable planks are raised 2 poles ( $g^1$  in Figs 212 D, 216), carrying on their top the ridge pole. The poles are kept in place by means of a tap, fitting in the plank.

Over the ridge poles is thrust a heavy plank ( $g^9$  in Figs 212, 213, 216), running from gable to gable. It is supported by a short prop ( $g^{10}$  in Figs 213, 216) in the center of the lobo.

On the top of the long plank are placed 2 bars ( $g^{11}$  in Figs 212, 213, 216) of the same length as the plank, one at each side of the ridge poles. They are fastened to the plank as well as to the poles by means of strong ratan strips.

Between the plank frame and the ridge pole there are 2 rows of bars, serving as joists ( $g^{12}$ ,  $g^{15}$  in Figs 212—216). In each row we find 3 pairs of joists and at the gables an odd joist, carrying a pair of long bars ( $g^{13}$ ,  $g^{16}$  in Figs 212, 213, 216), enclosing the ridge poles, and an odd bar at each side ( $g^{14}$ ,  $g^{17}$  in Figs 212—214), supporting the rafters.

There is here no inner roof, but we find 2 pairs of bars ( $h$  in Figs 212 D 215), resting at the corners of the plank frame, crossing below at the ridge pole.

The rafters and the battens are fastened in the usual



manner. At the gables the rafters however are not placed in 2 stories as in most lobos (Figs 212 C, 216).

The gable is bordered by 2 long planks, crossing at top and carved in the shape of a sickle, ending in some points ( $h^2$  in Figs 212 C, 214).

The roofing is the usual one of big shingles.

*The entrance* is situated at the south gable, near the eastern platform.

*The staircase* is made of a heavy log, hollowed out, with some steps hewn in it. It ends in 2 long taps, carved in the shape of human beings.

*The adornments* resemble those of the temples of Kante-woe type, especially the lobos of Peana and Benahoe. The chief subject of these carvings is the buffalo head. They are found on the outside of the floor frame and on the upright planks round the floor (Figs 212 D, 215).

Besides there were 3 pairs of buffalo horns, fastened to the upper plank frame (Fig. 216).

There were no *movables* belonging to the lobo.

### Sanggira. Gintoe. Boelili.

Beside the lobo at Doda there was in the district of Behoa at the time of my visit in 1918 another lobo in the village of Sangira. It seemed to resemble the temple of Doda in all essential respects, but it was in a very bad state, apparently altogether neglected, being used to store up old rubbish.

In the district of Bada were in 1918 two temples, one at the village of Gintoe, another at Boelili. I did not study them closely, but the construction seemed to be quite the same as that of the Doda lobo.

The lobo of Gintoe had at the time of my visit partly been altered into a dwelling house. When I came to Boelili, some natives were gathered in the lobo, probably invoking the spirits. They did not like me to disturb them by measuring the lobo and making sketches.

## VII. The Bokoe type.

### Bokoe.

In the district of Pipikoro there is a lobo, the lobo of Bokoe which cannot be classed with the other temples of the district, although it reminds one of the Kantewoe type, the Tole type and the Tobakoe type. There are however temples of this type in the districts south of Bokoe as we shall find in a following chapter.

The lobo of Bokoe is situated in the NE. corner of the village. Its gables turn toward the east and the west (85°).

It measures 7,60 m. by 7,20 m.

*The foundation* is made of logs in 3 layers, the 2 heavy logs at the bottom resting on two stones, partly buried in the ground ( $a^1$  in Figs 217—219), are parallel to the gables.

The next layer consists of 4 long logs ( $a^2$  in Figs 217—220), running from gable to gable, forming a support of the gable platforms and the fireplaces.

In the top layer there are 4 poles ( $a^3$  in Figs 217—219) the two middle ones being so long as to be able to support the lower frame of the long platforms ( $e^1$  in Figs 217—220).

*The floor.* On the top of the 4 poles are placed the floor planks ( $b$  in Figs 217—219) and the long beams of the inner floor frame ( $c$  in Figs 217—220). The heavy plank in the middle of the floor carries on its swell the center post of the structure ( $g$  in Figs 217—219).

*The floor frame* is double. The inner frame is made of 4 heavy beams, running from gable to gable and from side to side ( $c$ ,  $c^1$  in Figs 217—220), carrying the lower frame of

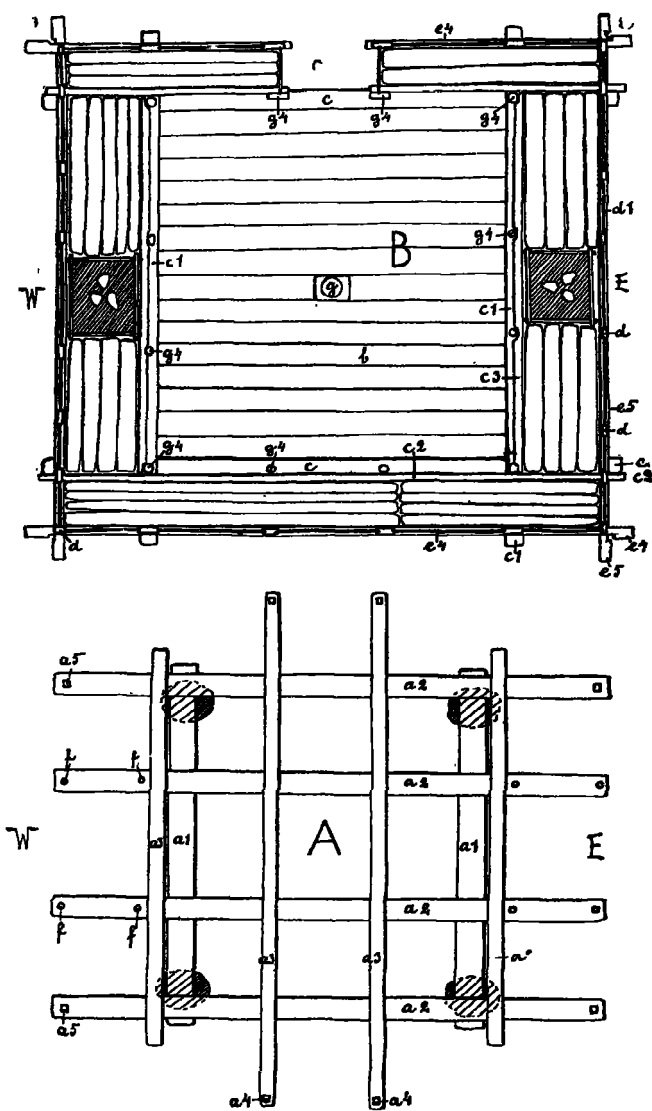
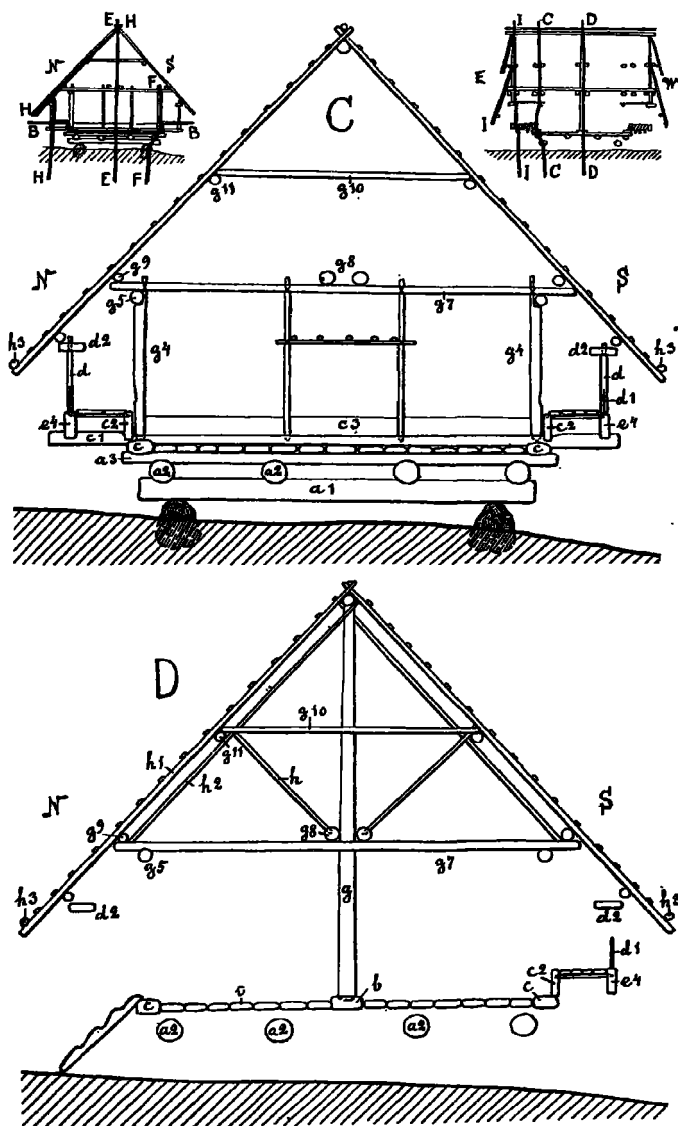


Fig. 217. The temple of Bokoe.

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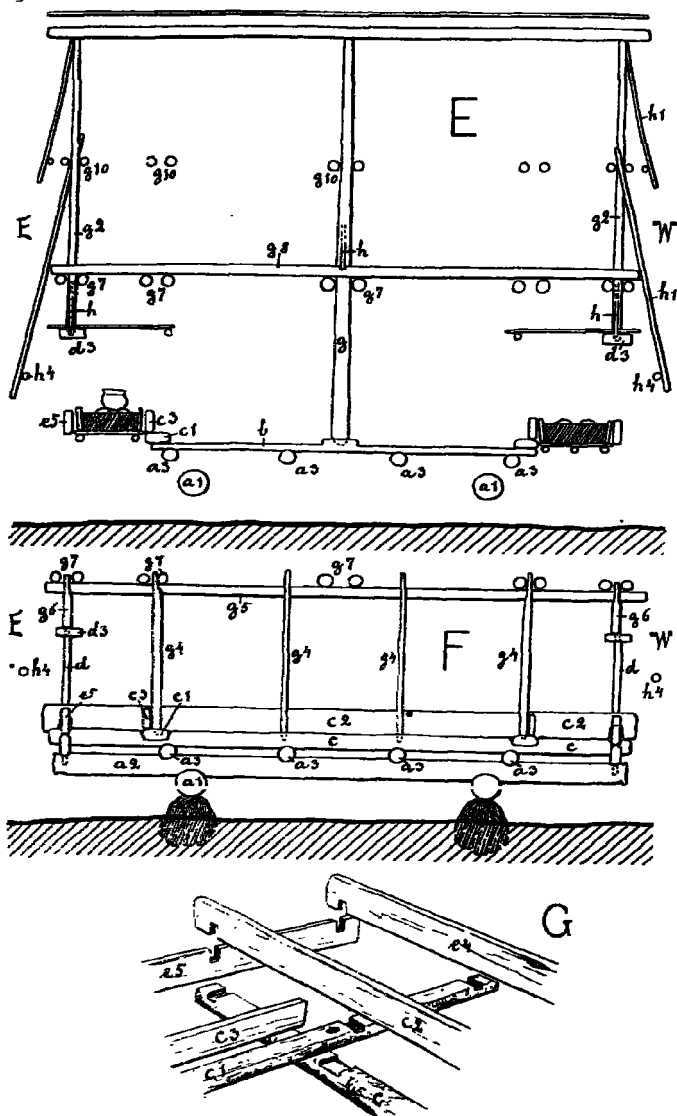
a— $a^5$ : foundation; b: floor planks; c— $c^3$ : floor frame; d,  $d^1$ : walls;  $e^1$ ,  $e^5$ : frame of the platforms; f: props, supporting the fireplaces; g,  $g^1$ : roof—truss.



C. D. 1:100

Fig. 218. The temple of Bokoe.

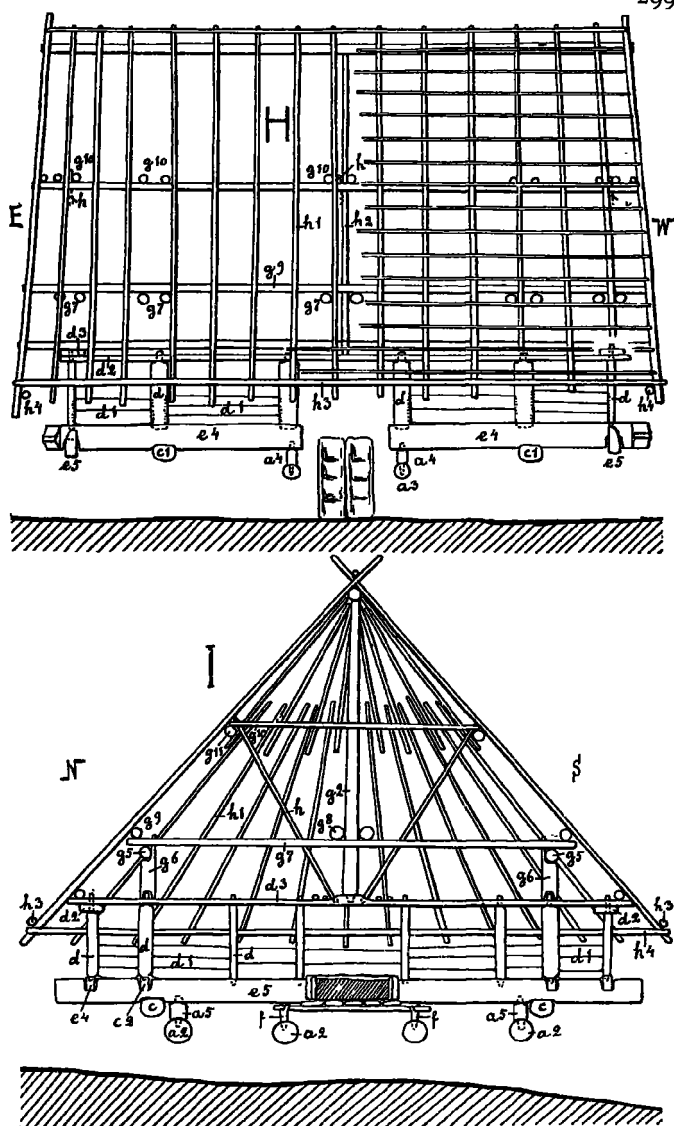
a¹—a²: foundation; b: floor planks; c—c³: floor frame; d—d¹: walls; d²: wall frame; e¹: frame of the platforms; g—g¹¹: roof-truss; h: slanting props, supporting the rafters; h¹, h²: rafters; h³: frame at the bottom of the roof. The miniature drawings show the place of the sections A—I.



E. F. 1:100.

Fig. 219. The temple of Bokoe.

a<sup>1</sup>—a<sup>3</sup>: foundation; b: plank in the middle of the floor; c—c<sup>3</sup>: floor frame  
 d: wall; d<sup>3</sup>: wall frame; e<sup>1</sup>, e<sup>3</sup>: frame of the platforms; g—g<sup>10</sup>: roof—truss  
 h: slanting props, supporting the rafters; h<sup>1</sup>: rafters; h<sup>4</sup>: frame at the bottom of the roof.



1:100.

Fig. 220. The temple of Bokoe.

$a^2$ — $a^5$ : foundation;  $c$ — $c^2$ : floor frame;  $d$ ,  $d^1$ : walls;  $d^2$ ,  $d^3$ : wall frame;  
 $e^4$ ,  $e^5$ : frame of the platforms;  $f$ : props, supporting the fireplaces;  $g^2$ —  
 $g^{11}$ : roof—truss;  $h$ : slanting props, supporting the rafters;  $h^1$ ,  $h^2$ : rafters;  
 $h^3$ ,  $h^4$ : frame at the bottom of the roof.

the platforms ( $c^4$   $c^5$  in Figs 217—220). The upper and outer floor frame consists here as always of 4 planks, put on edge, the side planks running from gable to gable ( $c^2$  in Figs 217—220), the other two planks just fit in between the long planks without being joined to them ( $c^3$  in Figs 217—219).

The 4 platforms are of the same width with a flooring of planks, supported by sticks, resting in notches in the upper floor frame and the lower frame of the platforms. This frame ( $d^1$ ,  $d^2$  in Figs 217, 219, 220) is made of 3 heavy planks put on edge at the end of the beams of the inner floor frame, resembling the frame round the floor of a Koelawi house of type B or C. How the planks and beams of the floor frames and the frame of the platforms are joined we see in Fig. 219 (A).

On this frame are raised a number of upright wall planks of different width ( $d$  in Figs 217—220) between which are pushed down some boards, forming with the upright planks walls like those of the Buro hobo or of a Koelawi house of type B.

The upright wall planks finish in a tap, fitting in a hole in the upper frame of the platforms, made of 4 planks ( $d^2$ ,  $d^3$  in Figs 218—220), crossing at the corners, both kept by the tap of the corner plank (Fig. 220).

There are 2 *fireplaces*, one at each gable (Figs 217, 219 E). The construction can be followed in the figures.

*The roof-truss.* The ridge pole is supported by the main post in the center of the structure as well as by 2 poles, one at each gable, resting on a swell on the plank of the upper frame of the platforms ( $g^2$  in Figs 219 E, 220 I).

On the inner floor frame we find 12 poles ( $g^1$  in Figs 217—219). The 4 poles along each side carry a bar ( $g^3$  in Figs 218, 219 F, 220 I), running from gable to gable, at the gables supported by a short prop ( $g^4$  in Figs 219 F, 220 I), resting on the frame of the platforms.

On the top of the 2 long bars ( $g^3$ ) are placed the joists, here



5 pairs ( $g^7$  in Figs 218---220), one pair at each gable pole, one pair at the center post and the remaining 2 pairs right above the inner floor frame.

On the joists are placed the usual long bars, one pair close to the poles and the post, an odd bar at each side of the roof ( $g^8$ ,  $g^9$  in Figs 218—220).

Higher up we have the same arrangement of joists and bars. The only difference is that we have here only 2 long bars close to the roof fastened to the rafters below the joists, the pair in the middle missing ( $g^{10}$ ,  $g^{11}$  in Figs 218—220).

Finally there are 3 pairs of slanting props ( $h$  in Figs 218—220), one pair in the center and one pair at each gable, increasing the stability of the truss.

The rafters are fastened in the usual manner to the long bars as well as to the upper plank frame of the platforms. The gables are made in 2 stories as in most lobos. At the bottom of the roof there is a frame of slender bars all round the structure. The bars of this frame are tied outside the rafters of the long sides ( $h^3$  in Figs 218, 220), inside the rafters of the gables ( $h^4$  in Figs 219, 220).

*The roofing* is of big wooden shingles, fastened to the battens.

*The entrance* is situated in the middle of the north side.

*The staircase* is made of 2 logs, placed abreast, slightly hollowed out, and with steps hewn in them.

There is in this lobo no kind of *adornment*, neither are there any *movables*.

No special type.

### Gimpoe.

(The lobo in the south part of the district).

Finally I am going to describe two temples, both situated north of the Koro, not far from each other: the southern lobo of the Gimpoe district and the lobo of Makoe-djawa. Both temples are small and seem to have been built with less care than the temples in general. That is perhaps the reason why it is difficult to class them among the other temples which I have studied. Being in some respects different, they agree in other points, sometimes resembling the lobo in the center of the Gimpoe district.

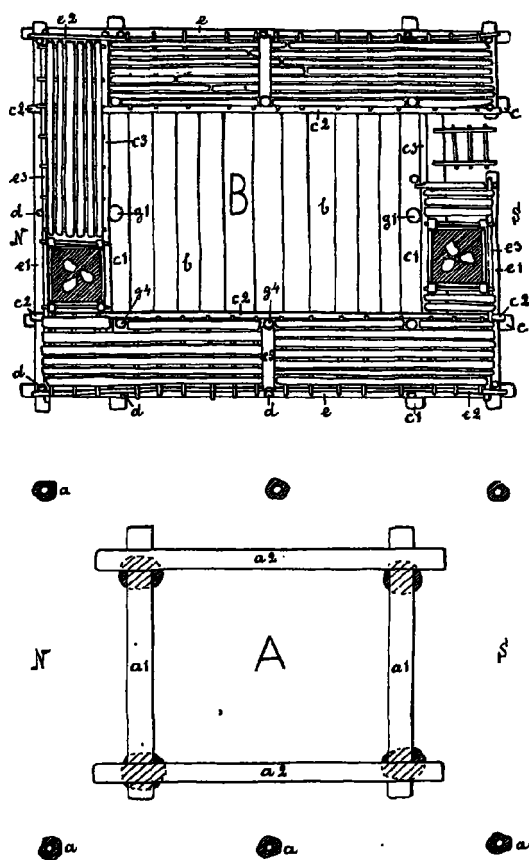
The lobo in question is situated in the SE. corner of the village with its gables toward the north and the south (0°).

It measures 6,50 m. by 5,20 m.

*The foundation* consists of 4 logs, placed as a frame (a<sup>1</sup>, a<sup>2</sup> in Figs 221, 222, 225), resting on 4 stones, partly buried in the ground, and of 6 poles (a in Figs 221, 223—225), 3 at each side, placed on flat stones. These poles support a frame of bars below the platforms (e, e<sup>1</sup> in Figs 221—225).

The logs of the bottom layer are parallel to the gables. The floor planks (b in Figs 221, 222, 225) on the top of the next layer consequently have the same position as well as the short planks of the inner floor frame.

Perhaps the plank in the center was somewhat heavier than the rest, but anyhow there was no swell, carrying a center post.



1:100.

Fig. 221. The southern temple of Gimpoe.

a—a²: foundation; b: floor planks; c—c²: floor frame; d: poles, belonging to the walls; e—e²: frames of the platforms; e¹: short plank, placed across the long platforms.

*The floor frame is double. The two very heavy planks, forming the short sides of the inner frame (c¹ in Figs 221—223, 225), run from one side of the structure to the*

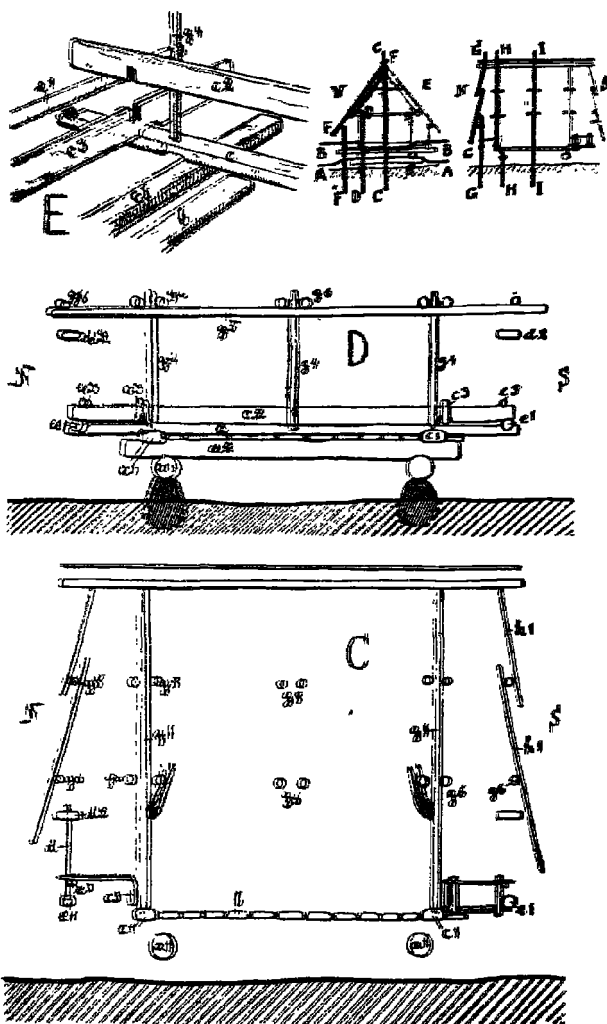


Fig. 122.

Fig. 122. The southern temple of Gumpoe.

a<sup>1</sup>, a<sup>2</sup> foundations; b: floor planks; c—c<sup>1</sup>: floor frame; d: pole, belonging to the walls; d<sup>1</sup>: wall frame; e<sup>1</sup>, e<sup>2</sup>: frames of the platforms; g<sup>1</sup>—g<sup>2</sup>: roof-truss; h<sup>1</sup>, h<sup>2</sup>: rafters. The miniature drawings show the place of the sections A—L.

other. They carry not only the planks or rather logs of the long sides, but help to support the above mentioned frame below the long platforms (Figs 223, 225 H).

The second floor frame is made as usual of 4 planks ( $c^2$ ,  $c^3$  in Figs 221—225), put on edge, working into each

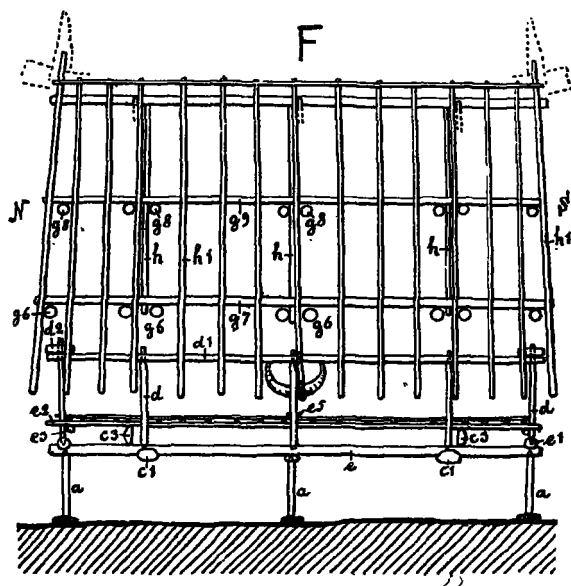


Fig. 223. The southern temple of Gimpoe.

1:100.

a: foundation;  $c^1$ ,  $c^3$ : floor frame; d: poles, belonging to the walls;  $d^1$ ,  $d^2$ : wall frame;  $e$ — $e^2$ : frames of the platforms;  $e^5$ : short plank, placed across the long platforms.  $g^6$ — $g^8$ : roof-truss; h,  $h^1$ : rafters.

other and into the inner frame by means of notches (222 E), the two side planks resting on the inner part of the frame below instead of outside as in most lobos.

The planks of the second frame, running from gable to gable and from side to side, carry a frame of bars at the bottom of the platforms ( $e^2$ ,  $e^3$  in Figs 221—225), giving a support to the outer end of the sticks underneath the

flooring of the platforms. The inner ends of these sticks rest on the second floor frame.

The platforms are all round of the same width. The flooring consists of bamboo laths, placed on top of the sticks just mentioned. The long platforms are divided in the middle by a board, put on edge underneath the floor

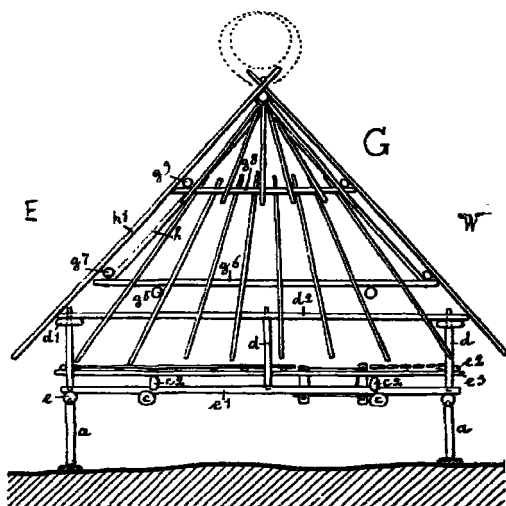
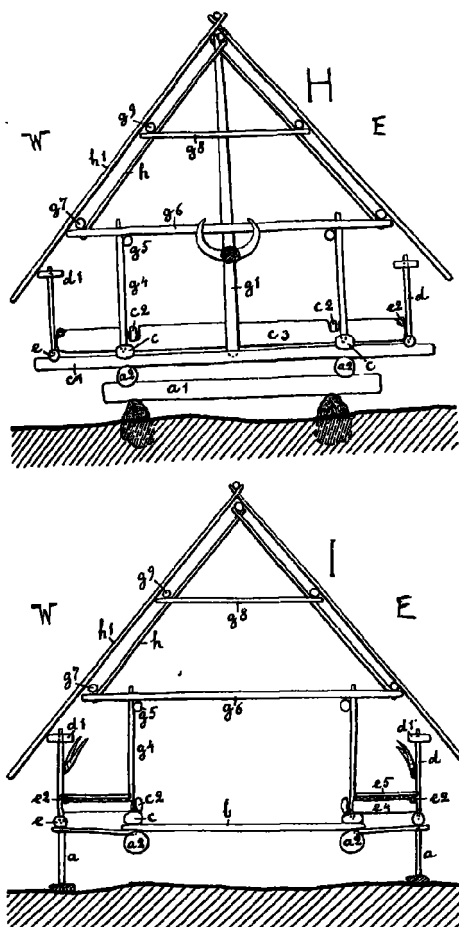


Fig. 224. The southern temple of Gimpoe.

a: foundation; c, c¹: floor frame; d: poles, belonging to the walls; d¹, d²: wall frame; e—e¹: frame of the platforms; g¹—g⁹: roof—truss; h, h¹: rafters.

(e¹ in Figs 225 I) and a small board on the top of the laths (e² in Figs 221 B, 223, 225 I).

There are no walls at all in this temple, the platforms not being bordered by any planks. Round the platforms are raised a number of slender poles (d in Figs 221—225), resting in notches in the frame below the platforms. The pointed top of the poles fit in the holes of a frame of 4 planks (d¹, d² in Figs 222—225). At the corners where



1:100.

Fig. 225. The southern temple of Gimpoe.

a—a²: foundation; b: floor plank; c—c²: floor frame; d: pole, belonging to the walls; d¹: wall frames e, e²: frames of the platforms; e¹, e²: short planks, placed across the long platforms; g¹—g⁸: roof—truss; h, h¹: rafters.

the planks cross, they are kept in place by the corner poles (Figs 223, 224).

There are 2 *fireplaces*, one at each gable just west of the middle line of the lobo. The construction is the same as of those of the temple in the middle of the district.

The *roof-truss*. Beside the above mentioned plank frame which at least at the gables to a certain extent supports the roof, there is a truss, resembling the one of the sooe eo of Towoeloe and Tipe. There is however here no pole at the gable, supporting the ridge pole, as can be seen in Figs 222C, 224.

The rafters of the sides as well as of the gables are arranged in the usual manner. Besides there are 3 pairs of inner rafters (h in Figs 223—225).

The roofing is of common atap, the ridge covered with idjoek, at the gables twisted in the shape of a pair of buffalo horns.

The *entrance* is at the south gable near the eastern platform.

The *staircase* is a simple ladder, made of sticks (221 B).

The only *adornments* were the above mentioned horns of idjoek at the gables as well as some buffalo horns, fastened inside the lobo to the short poles or sticks outside the platforms and to the two ridge poles.

No *movables* were found in this temple.



## Makoedjawa.

The lobo is situated in the SE. corner of the village, the gables turning towards the east and the west ( $280^{\circ}$ ).

It measures 6,60 m. by 5,60 m.

*The foundation* resembles that of the previous lobo, having layers of logs in the middle and at each long side 3 short poles (a in Figs 226—229), only the one in the middle resting on a flat stone. The other poles are driven into the ground.

The western gable has here a special foundation (Figs 226 A, 227 E).

The principal foundation consists of logs in 3 layers. At the bottom we find 2 short, heavy logs ( $a^1$  in Figs 226, 228, 229), parallel to the gables, resting on 2 stones, partly buried in the ground. The next layer also contains only 2 logs, ( $a^2$  in Figs 226—229) supported in their center by a stone.

Across these 2 logs are placed a number of 6 long poles, running from one side of the lobo to the other ( $a^3$  in Figs 227—229). The outermost poles as well as the one placed in the middle of the structure are of special importance resting on the short poles, raised along the sides of the foundation and carrying slender poles or sticks ( $d$  in Figs 226—229), supporting the bar at the bottom of the platforms ( $e^3$  in Figs 226—229) as well as the bar at the bottom of the roof ( $d^1$  in Figs 227—229). Besides the bar ( $e^3$ ) underneath the platform is at each long side supported by 3 very short props ( $e^1$  in Figs 227 C, 228 G).

*The floor.* On the top of the 6 poles just mentioned are placed the floor planks ( $b$  in Figs 226—229), running in the longitudinal direction of the lobo, the plank in the middle being heavier than the rest, carrying on a swell the center post of the structure ( $g$  in Figs 226, 227, 229).

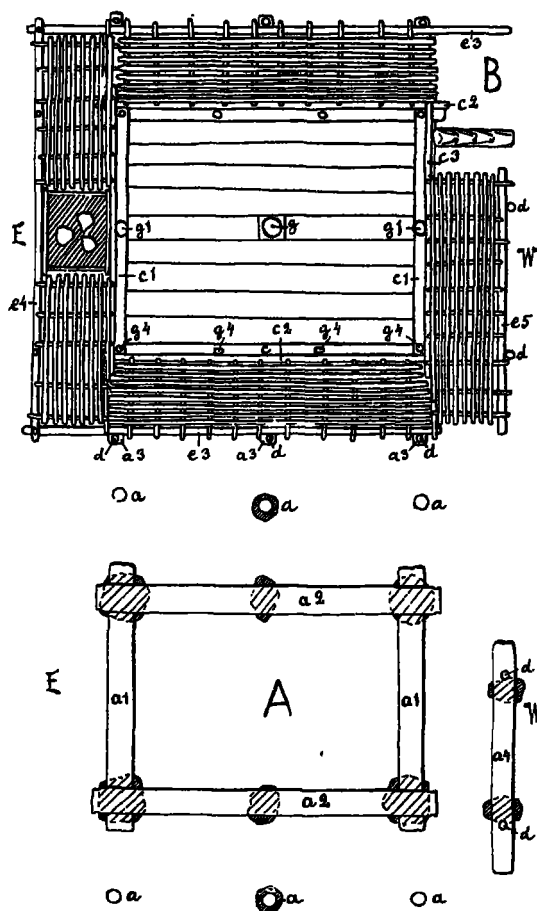
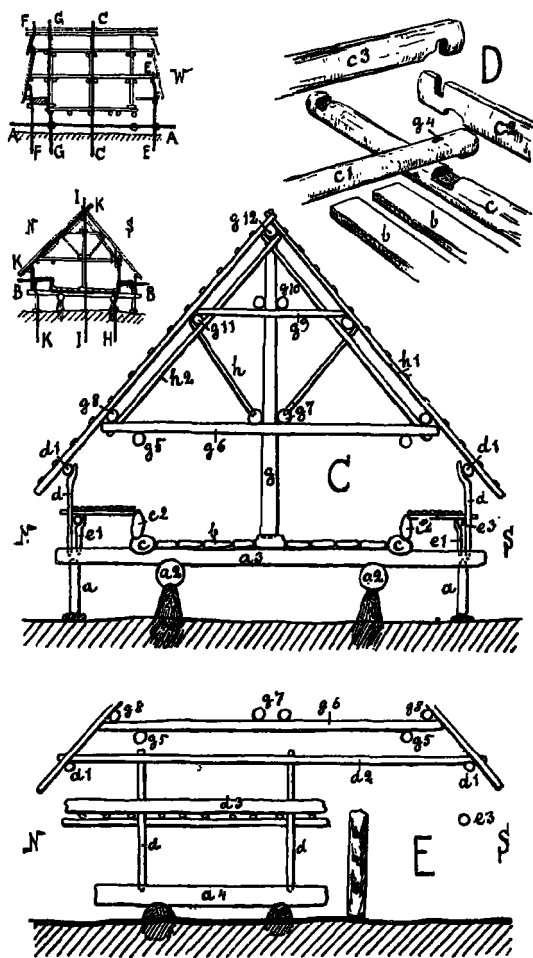


Fig. 226. The temple of Makoedjawa.

1:100.

a—a<sup>4</sup>: foundation; c—c<sup>3</sup>: floor frame; d: poles, belonging to the walls; e<sup>3</sup>—e<sup>5</sup>: frames of the platforms; g—g<sup>4</sup>: roof—truss;

The floor frame is double. Parallel to the floor planks we have the long logs of the inner frame (c in Figs 226—229 H). The short sides consist of logs, resting on the floor planks as well as on the logs of the long sides (c<sup>1</sup> in



C. E. 1:100.

Fig. 227. The temple of Makodjawa.

a—a<sup>4</sup>: foundation; b: floor planks; c—c<sup>3</sup>: floor frame; d: poles, belonging to the walls; d<sup>1</sup>, d<sup>2</sup>: wall frame; d<sup>3</sup>: wall plank; e: props, supporting the platforms; e<sup>3</sup>: frame of the platforms; g—g<sup>12</sup>: roof—truss. The miniature drawings show the place of the sections A—K.

Figs 226—229). The outer and upper frame is made of 4 planks put on edge ( $c^2$ ,  $c^3$  in Figs 226—229). These logs

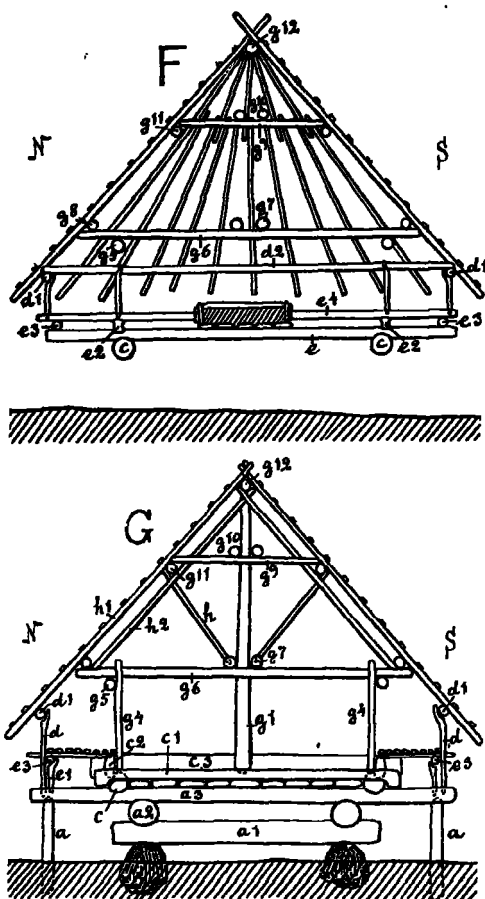
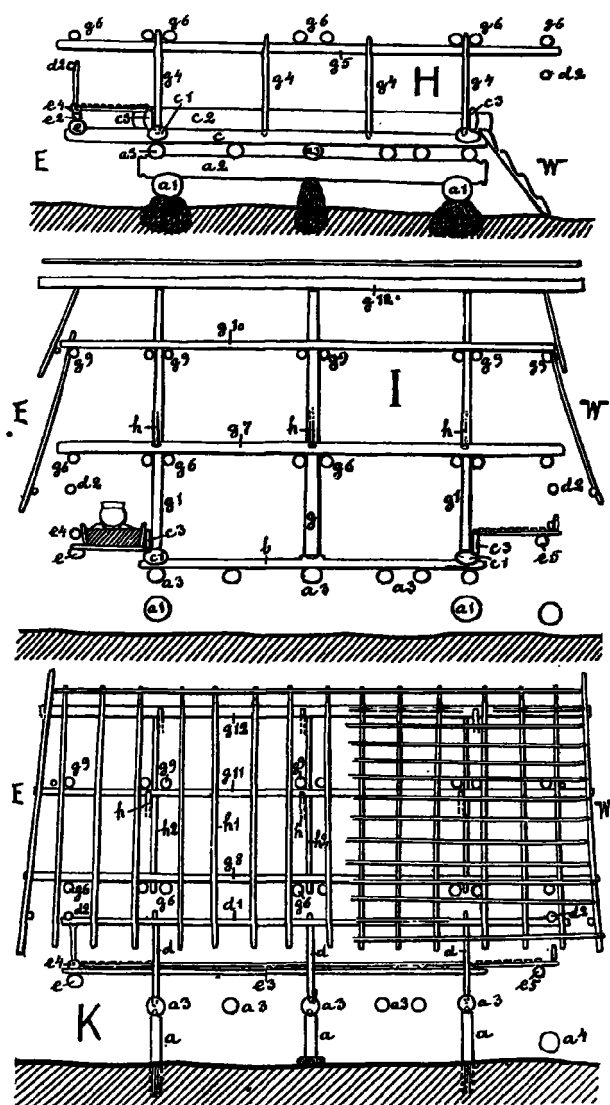


Fig. 228. The temple of Makoedjawa.

a—a<sup>3</sup>: foundation; c—c<sup>3</sup>: floor frame; d: poles, belonging to the walls; d<sup>1</sup>, d<sup>2</sup>: wall frame; e—e<sup>4</sup>: platforms; g<sup>1</sup>—g<sup>12</sup>: roof—truss; h: slanting props, supporting the rafters; h<sup>1</sup>, h<sup>2</sup>: rafters.

and planks, being joined where they meet, do not project beyond each other except the side logs of the inner floor frame which support the eastern platform (Fig. 227 D).



1:100.

Fig. 229. The temple of Makoedjawa.

a—a<sup>3</sup>: foundation; b: plank in the middle of the floor; c—c<sup>3</sup>: floor frame;  
 d: poles, belonging to the walls; d<sup>1</sup>, d<sup>2</sup>: wall frame; c—e<sup>3</sup>: frame of the  
 platforms; g—g<sup>12</sup>: roof—truss; h: slanting props, supporting the rafters;  
 h<sup>1</sup>, h<sup>2</sup>: rafters.

The *platforms* are of the same depth all round and constructed almost in the same manner as in the southern Gimpoe lobo. There are however here at the eastern gable short props ( $e^3$  in Figs 228 F, 229 H), placed on a pole ( $e$  in Figs 228 F, 229) supporting the bar ( $e^4$  in Figs 228 F, 229), bordering the platform. At the western gable the platform is supported by a special foundation as can be seen in Figs 226 A and 227 E.

There are no *walls*, save a long plank at the western platform.

We find here only one *fireplace*, situated in the middle of the eastern gable. It is the usual shallow box, filled with earth, resting on the inner floor frame ( $c^1$ ) as well as on a bar (Fig. 299 I  $e$ ) placed on the long side logs of the inner floor frame.

The *roof-truss* reminds one in some respect of that of the so called Tobakoe type, especially of that of the Lawe lobo. The ridge pole is supported by 3 posts, the one in the middle resting on the center plank of the floor, the other 2 on the short logs of the inner floor frame ( $g$ ,  $g^1$  in Fig. 229 I). There is no pole or poste at the gables.

Along the floor rise at each side 4 poles ( $g^4$  in Figs 226 B, 229 H), carrying a long bar ( $g^5$  in Figs 227—229 H), running from gable to gable. These bars are tied to the poles a little below the top. They carry 3 pairs of joists, one pair at each main post ( $g$ ,  $g^1$ ), and an odd joist at each gable ( $g^6$  in Figs 227—229). To the joists are fastened, close to the main posts, a pair of long bars, running from gable to gable ( $g^7$  in Figs 227—229), and an odd bar at each side ( $g^8$  in Figs 227—229), supporting the rafters.

There is a second row of joists and long bars of the same number as those below. The only difference is that the odd bars of this layer are fastened *below* the joists ( $g^9$ - $g^{11}$  in Figs 227—229).

There are 3 pairs of inner rafters ( $h^2$  in Figs 227—229), and 3 pairs of slanting props ( $h$  in Figs 227—229). The

rafters are fastened to the ridge pole and the long bars in the usual manner. At the gables they are placed in two rows, one at the top, one below, slightly radiating.

*The roofing* is of big shingles, roughly hewn without any carving.

*The entrance* is situated at the western gable, near the southern platform.

*The staircase* is only a simple log with some steps hewn in it.

There are no *adornments* and no *movables*.

## The temples according to literature.

As I have already mentioned there were formerly by most of the tribes in the interior of Central Celebes, the Toradjas as well as the Tomoris, a temple in every village of importance. The temples of the Saadang Toradjas, however, cannot very well be compared with the common lobo.

As most of the temples of the eastern part of Central Celebes nowadays have vanished we have only to refer to literature when we want to compare them with the ones which I have studied. There are still some temples left in the mountain districts south of Bada as well as in the district of Napoe, but I had never the opportunity of visiting these districts.

In the following I shall thus only be able to quote the statements of literature concerning these temples.

The temples, described and represented in literature, can be classed as follows:

People	Temple type	District and village		Author
Koro Toradjas	Koelawi type	Gimpoe	—	Grubauer
	"	Toewa	Toewa	Kruijt, Sarasin
	"	Lindoe Island	Iwongko	Sarasin
	"	Paloe Valley	Pakoeli	"
	Towoeloe	Northern Pa-	—	Hissink
Paloe Toradjas	(sooe eo) type	loe Valley	—	"
	Poso type?	Northern Pa-	—	"
		loe Valley	—	"
	Poso type	Parigi	—	Kruijt
	" "	Saesoe	—	"
	" "	Lage	Pandiri	"
	" "	"	Tamoengkoe	Sarasin
	" "	"	Koekoe	—
	" "	Pebatoe	BoejoemBajao	Kruijt
	" "	"	Labongia	"
	" "	—	Peera	Sarasin
	" "	—	Tolambo	"
	" "	—	Lamoesa	"
Poso Toradjas	" "	Ondae	Tando mBeaga	Kruijt
	" "	"	Langadopi	"
	" "	Pakambia	Boejoe Mapipi	"
	" "	"	Bentji	"
	" "	"	Palawanga	"
	" "	Pada	Perere	"



People	Temple type	District and village	Author
Poso Toradjas (according to Kruijt and Ad- riani); partly Koro Toradjas (according to the author).	Poso type " " " " " " " "	Kalaena Valley " " " " " " " "	Grubauer Abendanon Sarasin, Kruijt " "
Poso Toradjas	Mixed type	Rato	Grubauer
To Mori	Poso type " " " "	— Mori Petasia Lolangoijo Tedeboi Leboni	Kruijt " " " Grubauer Sarasin, Gru- bauer
	Bokoe type	Rampi	Grubauer
	Bada-Behoa type	Leboni	Sarasin, Gru- bauer
	" " "	Bada	Sarasin, Kruijt
	" " "	"	Kruijt, Schuijt, Grubauer
	" " "	"	Kruijt, Schuijt, Grubauer
Koro Toradjas	" " "	"	Kruijt, Schuijt, Grubauer
	" " "	"	Grubauer
	" " "	Behoa	"
	" " "	"	"
	" " "	"	"
	" " "	"	"
	" " "	Napoe	Kruijt, Schuijt, Grubauer
	Mixed type	"	Kruijt, Schuijt, Grubauer
	Unknown type	Tawaelia	Kruijt
		Chief village	



After P. and F. Sarasin

Fig. 230. The temple of Toewa.

## The Koelawi and the Towoeloe type.

### Toewa. \*

This lobo was first visited in 1897 by the two missionaries Doctor Kruijt and Doktor Adriani. The former writes:

\*»De lobo, ofschoon in samenstelling veel gelijkende op de Possosche geestenhuisen, was toch van een bijzonder type. Het gebouw staat niet op verticale palen, maar op liggende balken, die van den grond opwaarts in drie lagen op elkaar zijn geplaatst. Het dak is van plankjes, evenals de Baroega's te Tawaeli en te Biromaroe en de lobo's in het Loewoesche; aan de randen van het dak waren de plankjes op sommige plaatsen uitgehakt in den vorm van karbouwenhorens, waartuschen een ruw gevormde kop. . . . . In het

interieur vonden wij in de rondte de gewone zit- en kookplaatsen; ook het dubbele dak, waarvan het binnenste het eigenlijke dak van de geestenwoning voorstelt, was aanwezig. Tal van trommen hingen aan dit dak».

When the two scientists Sarasin some years later in 1902 visited the lobo, it seems to have been ready to fall, because they write the following about it:

»Der Lobo von Tuwa war ebenfalls wie die Wohnungen ein kleines Gebäude, mit Holzbrettern ziegelartig bedeckt; er sah wenig benutzt und zerfallen aus; die Sitzplätze im Inneren waren verfault».

If we compare their representation of this lobo with the description of Doktor Kruijt it is evident that this temple was built as the lobos of what I have called Koelawi type. In literature I have not found any other temples of this type mentioned.

## Paloe Valley

In the districts of the Paloe Valley north of Toewa there were not very long ago a number of heathen temples, but the informations given in literature are insufficient to give us an idea of the construction of these temples.

When Doktor Kruijt in 1897 visited the districts just north of Toewa — Pakoeli, Baloease and Bangga — he says there were no temples although the inhabitants were heathens. In 1902 when the Sarasins came to these districts, there was at least at Pakoeli a temple like a lobo, since they write:

»Der Lobo, das Gemeindehaus, weist einige wenige Reliefs auf, unter anderem am oberen Ende der Seitenplanken der Treppe Schweinsköpfe, die ziemlich gut gearbeitet sind».

I doubt that the carvings on the staircase of the lobo

were meant to represent the head of a pig, because the ornament, explained by the Sarasins and by Grubauer as being a pig's head, has nothing to do with the pig but is the conventionalized buffalo head. Besides the pig was no doubt of little importance to the natives of Pakoeli. At the time of the missionaries' visit in 1897 the natives did not keep the pig as a domestic animal.

About the temples of the Paloe Valley Hissink writes in 1909 (printed in 1912) as follows:

»Van de woningen trekt aanstonds de aandacht door haar massieven bouw, de bantaja of het geestenhuis, waar vergaderingen werden gehouden en plechtigheden werden gevierd.

Dit is een rechthoekig gebouw, tot welks binnenruimte een trap, gemaakt van een dikke zware plank met daarin uitgehouwen treden, toegang geeft.

Deze binnenruimte is in tweeën verdeeld, een midden-gedeelte en daaromheen een soort galerij; een weinig hoger gelegen, waarop de vergaderden plaats nemen.

In het middengedeelte wordt de plechtigheid verricht, zooals het offeren van een karbouw, enz.

In het bovengedeelte der bantaja worden allerlei offers gehangen als verschillende soorten van bladeren, mandjes met rijst, padi, enz.

Dit zijn offers, om de geesten gunstig te stemmen.

Dit geestenhuis noemde ik bantaja (boegineesch = baroega; baroe = lobo); dit is echter alleen de naam voor het geestenhuis op de woonplaats van den Magaoe; in de overige kampongs vindt men een So'oe eo.

Deze is kleiner, maar heeft ovrigens denzelfden vorm en doet dienst voor dezelfde doeleinden».

This description of the temples in the Paloe Valley, made in general terms, does not allow any conclusions as to the construction of the bantaja and the sooe eo. As to the bantaja I do not think that we can compare it with the bantaja in the mountain districts south of the Paloe Valley wheer

we in some places also find a bantaja or bentaja, much smaller and humbler than the lobo.

At Peana and Mopahi for instance the bantaja must be considered only as an annex to the village temple, here called lobo.

Possibly the bantaja of the Paloe Valley was a temple of Koelawi type or of the type formerly used in the adjacent districts eastward at the Tomini bay. The population of these districts belonged and still belong to the same branch of the Toradjas, namely the Paloe Toradjas.

### Parigi, Saoesoe.

Unfortunately literature has very little to tell us about the construction of the temples in these districts. In his big work »De bare'e-sprekende Toradjas» Doktor Kruijt writes:

»In Parigi en in Saoesoe bestonden tot voor koorten tijd (printed 1912) nog de heidensche dorpstempel (lobo). Te Parigi had men er twee, een te Parigi mpoe'oe en een te Masigi, en aan deze huizen besteede men meer zorg dan aan de langga (langgar) te Masigi, welke moest dienst doen als moskee. In Saoesoe waren zelfs de krokodillen-afbeeldingen in den tempel aanwezig. De lobos heetten in beide genoemde landen *banggoja*. In Saoesoe bewaarde men in den tempel een steen, die kleine steentjes voortbracht; aan dezen steen brengt men nog geregeld offers. . . .»

To judge from these lines the lobo of Saoesoe at least, having the typical carvings representing crocodiles, resembled the temples of the Poso district, especially as the author does not mention any difference. We get the impression that these carvings were missing in the lobo of Parigi. As the missionary does not make any remarks about the construction of these two lobos, being different to the Poso lobo

which he very well know outside and inside, there is sufficient reason for the presumption that they were of the same type as the Poso lobo, which means that the lobo type of the Bare'e Toradjas was found in Parigi as well as in Saoesoe, the two tribes of Paloe Toradjas which live close to the Bare'e Toradjas or Poso Toradjas. Possibly the temples of the Poso district, of Saoesoe, Parigi and Toewa form a series from Poso type to Koelawi type. From geographical point of view the bantaja of the Paloe Valley will be linked in between the lobo of Parigi and the lobo of Toewa. It is to be observed that the natives of the lower Valley no doubt have had much more to do with the inhabitants of Parigi than with those of Toewa which have come from the mountain districts of Lindoe. Under these circumstances it is possible, that the temples of the Valley agreed with those of Parigi and Saoesoe.

As to the sooe eo of the Paloe Valley, Hissink says that it resembles the bantaja but was smaller. Thus there does not seem to have been any difference of importance in the construction.

## Tobakoe.

In the district of Tobakoe further to the south we find, as I have already mentioned, small temples, called sooe oe which is exactly the same word as hooe eo (hooe or sooe means house, eo day), but if they were built in the same manner as the sooe eo of the Paloe Valley we do not know. But still I have reason to think that they were in some respects alike. Characteristic of the lobos of Poso type is the absence of a main post in the center of the temple. Very likely there was no such post neither in the Parigi and the Saoesoe lobo, nor in the bantaja of the Paloe Valley. Differently from most of the temples in the mountain districts

south of the Paloe Valley, that is to say the temples of Koelawi type, Kantewoe type, Tole type and Bokoe type, the sooe eo in Tobakoe lacks a center post, which makes me presume that the sooe eo of the Valley did not possess such a post either. After all, these two may have been of the same type.

In the districts, inhabited by the so called Paloe Toradjas, there are thus still three types of temples: 1) the Koelawi type, 2) the Lindoe type and 3) the Toewoeloe type. Formerly there was very likely a 4:th type, agreeing with the Poso type.



After Adriani and Kruijt.

Fig 231. The temple of Pandiri.

### The Poso type in general.

Long ago all the heathen temples of the Poso Toradjas were levelled with the ground. Thus I shall only have to quote the reports of literature (Figs 231, 232). The lobos of the bare'e speaking Toradjas are described by Doktor Kruijt as follows:

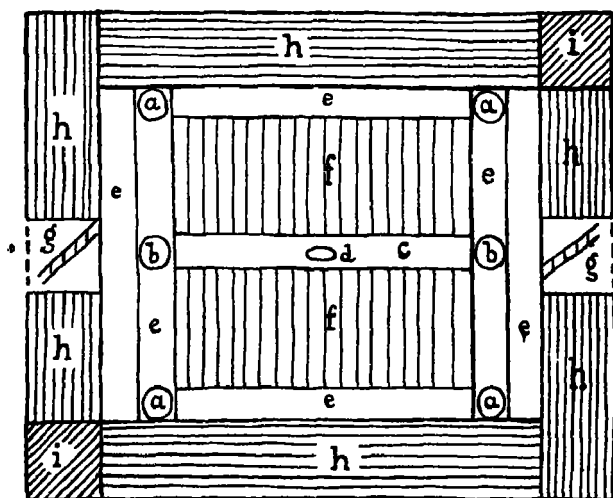
»De dorpstempel (lobo).

Voor de Anitoe's richte men in het dorp een huis op, den dorpstempel. Deze onderscheidde zich van de overige huizen in het dorp door de stevigheid van zijn bouw, dikwijls ook was hij 't grootste gebouw van het dorp. Trouwens



men kon licht iets beters maken van den tempel, dan van de gewone woonhuizen, daar hij met vereende krachten door alle bewoners van het dorp werd gebouwd.

De tempel heette lobo. . . . In het Bada'sch beteekent lobo 'plank'; nu is het wel opmerkelijk, dat wanden en vloer van de lobo steeds van planken waren gemaakt,



After Kruijt.

Fig. 232. Plan of a temple of Poso type.

a: tislalo (poles, supporting the roof); b: nokpalen (main posts, supporting the ridge pole); c: patasi (beam in the middle of the floor); d: tabo mbo'o (hollow, used for keeping a human head); e: dopi impoënde (floor frame); f: dopi ntjareko (floor plank); g: trap; (staircase); h: koen-toe; (platforms); i: haard; (fireplace).

terwijl wij nog nimmer een gewoon woonhuis met een planken vloer hebben aangetroffen. De dakbedekking van de lobo bestond ook dikwijls uit plankjes, maar dit komt ook wel voor bij gewone woonhuizen evenals planken wanden.

De tempel rustte op zes zware palen, die in den grond waren geplant; de vier buitenste heetten *tislalo*, en droegen de beide zware zolderbalken, die hier evenals bei gewone

huizen *popa'a* heeten. De beide middelste palen droegen den nokbalk. Op deze drie balken rustte het dak. De tempel had twee ingangen, één nar het Oosten en één nar het Westen gericht. . . .

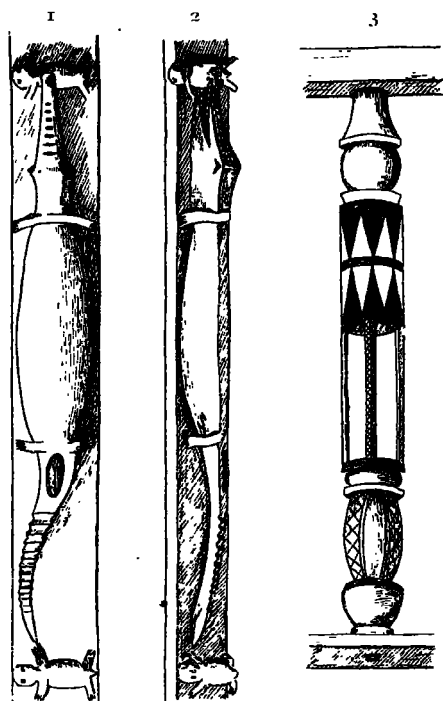


Fig. 233. Hollow in the plank in the middle of the temple where the head of an enemy or that of a slave was placed. The skull and the jaw have evidently been placed in the hollow when the photo was taken. No doubt they were hanging in the temple. From the temple of Koekoe. (The collections of Prins Henrik Museum at Rotterdam.)

De trappen, die toegang verleenden, waren gewoonlijk uit een zwaren boomstam gehouwen, in prauwvorm; soms waren ze ook versierd met insnijdingen; vooral in de Bergstreken (Napoe en Bada) treft men zulke versierde trappen aan.

Was men den tempel binnengetreden, dan had man een open ruimte vóór zich. Langs de lange wanden van het ge-

bouw zag men een verhooging, bij wijze van rustbank. Deze heette *koentoe* en diende tot slaapplaats voor de deelnemers aan een tempelfeest. Midden in den vloer liep over de geheele lengte een zware plank, *patasi* genaamd. Op deze plank



After Adriani and Kruijt.

Fig. 234.

1, 2: Wood carving, representing crocodiles;  
3: carved pillar, called toemampoe. From the  
temple of Boejoe mBajaoe.

stonden de huisvaders, wanneer zij de Anitoe aanriepen, zooals wij beneden zullen zien. In het midden van deze plank was ook een holte uitgesneden, waarin de buitgemaakte menschenschedel kon worden gelegd (Figs 233, 236). Geheel in het rond langs de slaapplaatsen lagen ook zware planken,

*dopi mpoënde*, 'de planken voor het dansen'. De ruimte tusschen deze zware planken was belegd met kleinere planken die den naam droegen van *dopi ntjareko* 'rammelplanken'. In twee of meer hoeken van den tempel vond men haarden, war het voedsel kon toe bereid worden.

Vlak boven den middelsten vloerbalk (*patasi*) was de middelste zolderbalk of *paladoeroe*, dien men ook in de gewone woonhuizen aantreft. Boven op het midden van dezen zolderbalk verhief zich een stijl, welke gewoonlijk zorgvuldig was bewerkt en uitgesneden. In den tempel te Tando mBeaga in Onda'e waren zelfs twee menschenfiguren, een man en een vrouw, in dien stijl uitgesneden. Deze stijl heete *toemampoc* (Fig 234:<sup>3</sup>). Onder het eigenlijk dak, met palmbladeren of plankjes gedekt, bevond sich het geraamte van een tweede dak, *derenga* genaamd, alleen bestaande uit de daksparren en dwarslatten. Terwijl het bovenste, eigenlijke dak het geheele gebouw beschermde, overspande dit tweede dak alleen de ruimte tusschen de rustbanken in gelegen, dat gedeelte dus, dat special bestemd was vor den eeredienst. Het binnenste gedeelte van den tempel was dus de eigenlijke woonplaats der Anitoe. Boven in dit tweede dak, dicht bei de *toemampoc*, zag men een klein platvorm met de jonge bladeren van de *Arenga saccharifera* belegd. Dat was de *twooegi*, daar woonden de Anitoe.

Aan den middelsten zolderbalk zag men nog een rek hangen, dat *wontja* heette; hieraan werden de stukken buitgemaakte menschedels opgehangen, en voorts alles wat bij het tempelfeest gebruikt werde, zooals de reepjes foeija, die ieder daarbij om den pols gewonden werden. — — — Wat men in elken tempel van de verschillende Toradja-stammen vindt is een bosje bamboestengels van de *Bambusa longinodis*, aan een of aan beide der middelste palen gebonden. Hierlangs dalen de geesten in het gebouw neer. Ook hangen in alle tempels tal van trommen met rotan banden aan de daksparren. . . . Iedere tempel heeft ook zijn eigen reliquieen voornamelijk bestaande in oude

zwaarden en speren. . . . Wanneer men een Bare'e-Toradja'schen tempel betrod, werd men aanstonds getroffen door eenige groote figuren, die onder aan den middelsten zolderbalk (*paladoeroe*) waren uitgesneden. Het waren twee krokodillen-figuren, waarvan één gewoonlijk op een aap loerde en de andere een aap in den bek had. Bij de Berg-Toradja's vinden wij deze figuren niet. . . . (Fig. 234: 1,2)

Boven zijden wij reeds, dat in den tempel te Tando mBeaga de *toempeestijl* voorzien was van een mannelijke en eene vrouwelijke figuur met overdreven groote genitalia. Zulke beelden vonden wij ook uitgesneden op de vier hoekpalen in den tempel te Lembo mPangi in het Bovenland van Loewoe. Verder waren in nagenoeg iederen tempel van eenige beteekenis vrouwenborsten en genitalia op bedoelde palen\* uitgehouwen. In the lobo van Langgadopi vond men eene vorstelling van den coitus: twee in elkaar geschoven genitalia. . . . Hie en daar (zooals te Labongia en te Boejoe Mapipi) vonden wij ook afbeeldingen van hagedissen, die in het verlengte van een vagina of van een paar vrouwenborsten waren gesneden. . . . Ook bij de Bare'e Toradja's vond men in iedereen tempel buffelgeweien opgehangen»..

In a note on page 289 Kruijt says also: »In de dorps-tempel van Saloe Maoge vonden wij behalve krokodillen ook slangen afgebeeld op de *paladoeroe*. De koppen dezer dieren waren alle naar het Oosten gericht. . . . »

For all this we still do not know how the floor was supported, how the platforms were constructed, how they were supported, whether there were any walls or not, how the fireplaces were made and so forth. But if we study the representations of the lobos of Poso type, we are able to partly make up the deficiency of Doctor Kruijt's description. A few notes in literature will also help us.

So has Kruijt for instance a very good representation of the lobo of Pandiri (Fig. 231). We find here the floor of the lobo supported by a great number of upright poles. To judge from Kruijt's remark about of the lobo of Toewa (»het

gebouw staat niet op vertikale palen, maar op liggende balken») this must have been the usual foundation of the Poso lobo, the only kind of lobo which Kruijt had seen at the time of his visit to Toewa in 1897.

According to the same representation, the platforms are supported by poles, driven down into the ground. These poles seem to have been forked at the top, holding long bars or beams, very likely 6 in number, placed crosswise, parallel to the gables. These 6 bars probably supported a layer of poles running from one gable to the other, carrying the floor planks, the gable platforms and the fireplaces.

As to the walls the representation in question gives us to understand that the walls were made of 2 or 3 long planks but not so high as to reach the bottom of the roof. In the representation we find a little landing at the staircase which I never saw in a lobo of the mountain districts.

### Special Temples

The informations about the special lobos of the Poso district are rather scarce. In the above quoted work by Kruijt, he mentions the lobos of Saloe maoge, Tando m Beaga, Lembongpangi, Langgadopi, Labongia, Boejoe Mapipi, Palawanga, Bentji, and Wojowatoe. In other papers he mentions the presence of a lobo in several villages without giving any further information about the temple.

### Perere.

In a paper by Adriani and Kruijt called »Van Poso naar Mori» they mention on page 207 the lobo of the village Perere in the district of Pada, SE. of Ondae. They write as follows:

»Perere is het voornaamste dorp der Topada; het bezit ook de eenige lobo van den geheelen stam, een statig gebouw, de grootste van deze soort, welke wij ooit hebben gezien. De gewone versieringen, in hout gesneden, krokodillen en menschen gedaanten waren aanwezig.» This indicates that the dimensions of the Poso lobos were quite different at different places.

### Tando m Beaga

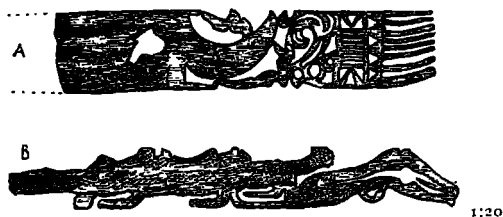
One of the bigger lobos of the Poso district may have been the temple of the village of Tando m Beaga in Ondae according to the natives. They told me that it had been built with great care and richly ornamented with carvings. In 1909 this temple was destroyed without having been the subject of any careful study.

### Lamoesa, Tolambo, Tamoengkoe

The Sarasins mention by the way some temples as the lobo of Lamoesa, SE. of the Poso lake, the lobo of Tolambo at this lake and the lobo of Tamoengkoe in the district of Lage. They write as follows about the Lamoesa lobo:

»Der hoch auf einem Hügel alleinstehende, weissgetünchte Lobo ist weithin siehbar,» and about the Tolambo lobo: »Wenige Häuschen lagen auf einem nahen Hügel zerstreut; ein Lobo von kleinen Dimensionen und aus lichtem Material erstellt, war völlig zerfallen und verwahrlost; wir fanden daher keine Schwierigkeit den Giebelschmuck mitzunehmen (Fig. 235). Dieser bestand auch hier aus zwei seitlich in die Luft ragenden, geschnitzten Planken und einem Mittleren,

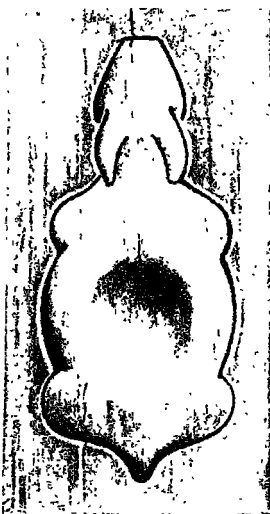
nach vorne schauenden Brette, das in durchbrochener Arbeit eine Eidechsenartige Tierfigur darstellte.» Meyer and



After P. and F. Sarasin.

Fig. 235. Gable adornment from the temple of Tonabo (Tolambo).

Richter have a representation of this lobo (1903) as well as of the gable adornment and a simple temple drum. The temple has evidently been altered into dwelling house and consequently lost the characteristics of a so called Poso temple.



After P. and F. Sarasin.

Fig. 236. Hollow in the center plank of the temple floor. The temple of Tamoengkoe.

About the lobo at Tamoengkoe they write: »Der Lobo zeichnete sich äusserlich wenig vor den anderen Häusern aus; ... Die Schnitzereien, soweit wir übersehen konnten, schienen von roher Natur zu sein. Acht Hirnkapseln mit weggeschlagenem Gesichtsteil hingen von dem Dach der Anitu's herab. Der Nabel des Hauses, Fig. 236, welcher, wie schon gesagt, zur Aufnahme des erbeuteten Kopfes dient, war hier sorgfältiger behandelt als gewöhnlich, wo es nur eine einfache Delle des Fussbodens darstellt.

Es war, wie das nach einer Skizze angefertigte Bild zeigt, von einer Schildkrötenartigen Figur umgeben, die auf einer Seite in einen Büffelkopf auslief.»



## Peoera.

Grubauer mentions in a few words the lobo of Peoera on the east side of the Poso lake. He writes:

»Dieser schien selten benutzt zu werden und war dem Einsturz nahe . . . Das alte Gebäude befand sich wie gesagt in ziemlich desolatem Zustande. Von oben lachte die Sonne durch das vielfach gespaltene Dach, im Inneren tummelte sich eine Schar Ziegen. In der Anlage und Ausstattung glich es völlig dem Milieu der schon früher geschilderten Lobos<sup>1)</sup>, selbst die geschnitzten Krokodilmotive fehlten nicht, zeichneten sich sogar durch grössere Lebendigkeit aus. Auf einer Darstellung belauert ein Krokodil ein Ferkel, auf einer zweiten hat er dies bereits erfasst.»

From these quotations is evident that the lobos of the Poso district have all been much the same not only as to the construction but also concerning the adornment in the form of wood carvings. Whether there have been any variants or not cannot be decided by means of literature.

## Mori.

Lobos of Poso type have also been found outside the district as for instance in the Mori district where, according to Kruijt, the temples were called lobo and resembled those of the Poso district.

About the lobos of Petasia and of Lolangoijo, villages in Mori, the two missionaries write in the above mentioned work the following:

»Het dorp (Petasia) bestaat uit 50—60 huizen, verdeeld op twee heufels..... In het dorp staat een lobo, geestenhuis, welke volgens de beschrijving geheel overeenkomt met de lobo's in de Toradjalanden». And about Lolangoijo: »... het huis van den kabosenja, Papa i Koerembo, welk

<sup>1)</sup> Refers to the lobos of Rampi and Lebani of the Kalaena Valley.

huis tevens voor lobo wordt gebruikt; op de zolderbalk waren een krokodil en eene vrouw met groote vagina uitgeschneden; aan de palen waren geweien opgehangen van alle buffels, die bij offerfeesten waren geslacht. »

The missionaries also mention a lobo at the village of Tinoleba, and in another paper Kruijt says that every village of importance in Mori had a temple called lobo.

### Kalaena Valley.

In the valley of the Kalaena River the lobos seem also to have been of Poso type<sup>1)</sup>, although somewhat different. There are no less than 4 representations of lobos from this district two of which have been described by the Sarasins, two by Grubauer<sup>2)</sup>.

<sup>1)</sup> According to Kruijt and Adriani the inhabitants of this valley should be so called Poso Toradjas which however may be questioned.

<sup>2)</sup> Abendanon has a representation of a temple at Sapalemba, just north of Rato, but he has nothing to tell us about it. To judge from the representation it was a temple of Poso type, but in a state of decay.



After P. and F. Sarasin.

Fig. 237. The temple of Manangaloe.

## Manangaloe.

The Sarasins write about this lobo the following:

»Die Grösse des Lobo's von Manangalu machte sofort klar, dass er nicht für die wenigen Häuser allein, wo wir uns befanden, sondern für einen ganzen Distrikt als Mittelpunkt dienen müsse. Da die Bauart der Lobo's durch das ganze, von uns auf dieser Reise durchschrittene Toradja-Gebiet hin mit kleinen Abweichungen dieselbe bleibt, so wollen wir gleich hier eine kurze Schilderung dieses Gebäudes geben.

Von den gewöhnlichen Pfalhäusern des Dorfes unterscheidet sich das Äussere des Lobo durch seine stattlichkeit, durch das sorgfältiger ausgewählte Baumaterial, die starken Stützen und kräftigen Planken des Fussbodens und der

Seitenwände und den Giebelschmuck. Hier bestand dieser letztere aus zwei langen, flügelartig in die Luft ragenden Brettern, welche in bizarrer Weise durchbrochen gearbeitet und an den Enden einer vielzinkigen Gabel gleich gestaltet waren. Von der Kreuzungsstelle der beiden Planken in der Giebelmitte ragte ein aus Holz geschnittener Tierkopf nach vorne. Eine gute Treppe führte nach oben. Das Innere stellte einen grossen, ungeteilten Raum dar, welcher rings herum erhöhte Schlaf- und Sitzstellen aufwies, sowie einen Herd zum Abkochen. Durch die Mitte des Raumes zog etwas über Manneshöhe in der Längsrichtung des Hauses ein starker Balken, der auf seiner Unterseite mit rohen Skulpturen bedeckt war, Krokodile mit Menschen im Rachen, Affen u. dergl. darstellend. Auch an den Türpfosten waren Schnitzereien, zumeist in der Form von Geschlechtsteilen, angebracht. Von der Mitte des genannten Längsbalkens ging eine Säule senkrecht nach oben zum Dache; sie war hübsch in Längsstreifen durchbrochen gearbeitet und mit Rot und Schwartz bemalt; allerlei Büschel von Zauberkraut hingen daran. Die Säule ist das allerheiligste des Hauses; denn sie dient den dorfbeschützenden Anitu's als Wohnsitz. Darum ist auch oben um sie herum ein kleines Giebeldach unterhalb des Hauptdaches angebracht, welches diese Geisterwohnung von dem übrigen Raume abtrennen soll. Daran hingen grossen Trommeln, aus Baumstämmen gearbeitet und mit Fell ein- oder auch beidseitig bekleidet.

Auf der dicken Planken des Fussbodens befand sich in der Mitte des Hauses eine Vertiefung, wie eine flache Schüssel gestaltet, umrahmt von büffelhornartigen Figuren. Das ist der 'Nabel des Hauses' in welchen der erbeutete, aus dem Kriege heimgebrachte feindliche Kopf hineingelegt wird. Roh, aus Holz geschnittene Büffelköpfe, knochenartige Stirnstücke und Hörner von Büffeln waren als Schmuck der Wände angebracht. Zwei menschliche Schädel hingen unter der Anitu dach;» . . .



After P. and F. Sarasin.

Fig. 238. The temple of Lembongpangi

## Lembongpangi.

About the lobo at Lembongpangi the Sarasins only write as follows:

»Der Lobo des Ortes stand auf dünnen, durch diagonal angebrachte Stangen gestütztem Pfahlgerüst; in der Mitte ruhte sein Boden einem Felsblock auf; gedeckt was er mit Dachziegelartigen Rindenstücken. Im Inneren waren dieselben Skulpturen wie in Manangalu, Krokodile mit Menschen oder Affen im Rachen, Schlangen und dergleichen angebracht.«



After A. Grubauer

Fig. 239. The village of Maboengka with its temple.



After A. Grubauer.

Fig. 240. The interior of a temple of Poso type. According to Grubauer this is the temple of Rato, but no doubt that is a mistake. In all probability it is the temple of Maboengka.

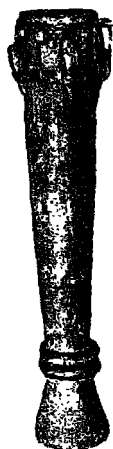
## Maboengka.

Figs 239, 240.

Further up the valley we find the villages of Maboengka and Rato, visited, described and represented by Grubauer. Maboengka is nearest to Lembongpangi the lobo of which, judging from the representation, seems to resemble the lobo of Maboengka. Grubauer's remarks are very brief, but make it evident, that the construction is essentially the same as of the two other temples of the valley. He writes about the lobo of Maboengka as follows:

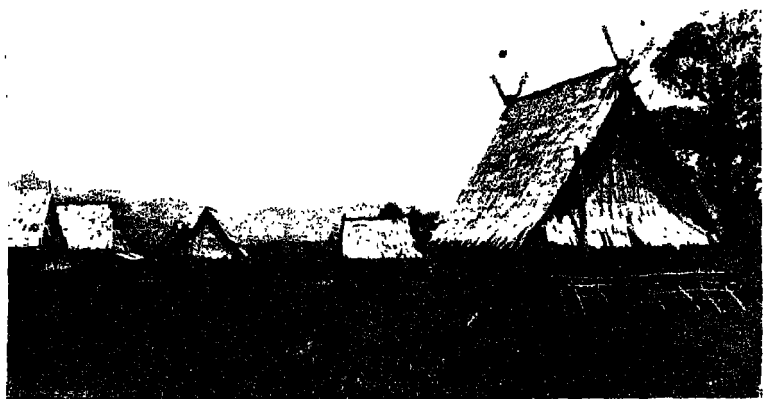
»Das grösste Gebäude war auch hier wieder 'der alte Lobo. Ventilationsluken im Dache unterschieden ihn äusserlich von dem Geisterhause in Rato. Sein Inneres entsprach nicht den gehegten Erwartungen. . .

Das Hauptstück aller Lobos, der Lebensbaum, war in Mabungka zu einem Busch mittlerer Grösse zusammengeschrumpft. Den geschnitzten Mittelbalken zierten dieselben Krokodil-Motive wie in Rato. Der für die Randgalerien vorgesehene Platz war lediglich durch 4 einfach geschnitzte Eckpfeiler, zwischen denen sich eine ringsum laufende handhohe Planke herumzog, abgegrenzt. Es gelang mir nach langem Zureden, eine der hier *kratoe* genannten Frauentrommel für hohen Preis zu erwerben.»



After A. Grubauer

Fig. 241.  
Drum, *kratoe*,  
from the  
temple of Ma-  
boengka.



After A. Grubauer.

Fig. 242. The village of Rato with its temple, the big house in the foreground

## Rato.

This lobo seems to be somewhat different to the lobo of Maboengka. Although Grubauer's description of this lobo does not agree with the representation of the interior of the temple, I shall quote what he says about it:

»Die Mächtigkeit dieses Gebäudes liess ohne weiteres den Schluss zu, dass es unmöglich von den wenigen Dorfbewohnern allein erricht sein konnte. Vielmehr durfte es der Hauptlobo der Hochebene sein, zu dessen Bau sämtliche Dörfer beigetragen haben mochten. Schon aus beträglicher Ferne sah man die schönen Giebelzierate, die windmühlenflügelartig die beiden oberen Sparrenenden schmückten. Sie bestanden aus 3 durchbrochen geschnitzten Brettern. Diesen Schmuck vervollständigte ein unterhalb dieser Flügel horizontal vorstehender phantastischer Tierkopf, der noch am ehesten für einen Vogelkopf gehalten werden konnte.

Seltsamerweise war der Lobo von einem aus baumstarken Pfosten hergestellten Kral umfriedet, welcher überklettert werden musste, sofern man zu den Aufstiegen ge-



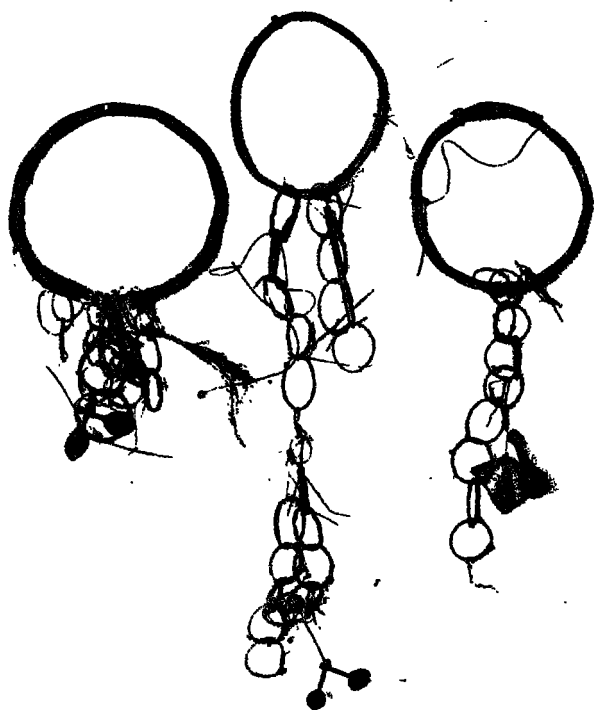
langen wollte. Auf mein Befragen erfuhr ich, dass diese Umsäumung dazu diene, eingefangene wilde Büffel in Gewahrsam zu halten... Die zum Lobo hinanführenden Treppe — je eine von der Mitte der beiden Schmalseiten aus — bestanden aus halbierten Baumstämmen mit Kerbstufen. Die Stämme liefen nach oben zu in weit vorstehende Enden aus, die in abenteuerliche Tierköpfe umgestaltet waren.

Von dem Innenraume des Lobo wird man sich am besten an der Hand der Abbildung 215 eine Vorstellung machen können. Das Hauptinteresse beanspruchte der Mittelpfosten (auf der Photographie leider nicht mehr ersichtlich\*), der an seiner oberen Hälfte den bis zum Dache hinaufreichenden Lebensbaum trug und gleichzeitig den Marterpfahl vorstellte, an welchen die Todeskandidaten vor ihrer grässlichen Abschlachtung gefesselt wurden. Eine plumpe Schnitzerei daran stellte einen nach oben gerichteten Büffelkopf dar. Der Pfosten war mit Blutspritzen besudelt, und Teile von Hirnschalen Erschlagener waren mit Holzdornen daran befestigt. Am Grunde derselben, in der Mitte eines den ganzen Raum durchlaufenden Balkens war eine kreisrunde Schüssel in derber Schnitzerei herausgearbeitet, beiderseits von einem rohgeschnitzten Büffelkopf flankiert, die wie in der Dusunga von Tedeboi dazu bestimmt war, dem auf einer Kopfjagd erbeuteten oder hier dem Opfer geraubten Kopf aufzunehmen. Um diesen wurden dann Tänze aufgeführt und Ansprachen gehalten...

An einem oberen Horisontalbalken, sowie an einer Rückwand des Lobo hingen an 40 Stück starker geflochtener Rotanringe, wie sie zur Fesselung der Opfer benutzt wurden. An je einem grossen Ringe hingen 2 Rotanring-Ketten, an deren letzten Gliedern verschiedene hölzerne Miniaturgegenstände, wie Ruder, Messer, Lanzen usw. sowie Stückchen

\*) It is difficult to understand *why* the post is not visible, the plate apparently not being damaged and the photo representing exactly the center of the lobo.

von Hirnschalen befestigt waren. Diese an den grossen Reifen nachträglich angebrachten Ketten und Anhängsel waren die Symbole einer Bildersprache, im welcher dem Nachwuchse von den Heldendaten der Väter und dem



After A. Grubauer.

Fig. 243. Ratan rings, probably from the temple of Rato or Mabocngka.

Verlaufe der Kopfjagden berichtet wurde. Diese höchst interessanten und merkwürdigen Reifen werden *Takóle* genannt (Fig. 243). Sie sind als Urkunden zu betrachten, deren kleinste Einzelheiten den Eingeborenen verständlich sind so dass Folgerungen daraus gezogen werden können. Um dies ver-

ständlicher zu machen, will ich einige Beispiele anführen. So bedeutet z. B. der grosse Ring eines solchen Takóle, dass der Gefangene damit entweder schon bei seiner Gefangennahme gefesselt und mit Hilfe desselben herangeschleppt oder aber erst im Lobo mittels desselben an den Marterpfahl gefesselt wurde. Das Geflecht der zu Ringen gewundenen Rotangstränge macht erkennbar, was davon zutrifft. Von anhängenden 2 Rotangring-Ketten endet beispielsweise die eine in einer kleinen Bambusröhre, aus welcher ein Stück mehrfach geknüpften Rotangs herausragt. Dies bedeutet, dass ebensoviele Sklaven bzw. Gefangene hinweggeführt wurden, als Knoten eingeknüpft sind. Dasselbe in anderer Knüpfart kann aber auch besagen, dass der Knotenzahl entsprechend ebensoviele Schädel geschnellt wurden, wobei dann die Überfallenen an Ort und Stelle getötet worden waren. Oder aber an einer Ringkette sind ein oder mehrere Rudermodelle befestigt. Diese besagen, dass die Überfallenen auf einem Gewässer überrascht und dabei gefangen genommen wurden. Ein Köcher wiederum bedeutet, dass der Überfallene beim Abzapfen des Palmweines überwältigt wurde, ein Röllchen Pisangbast: beim Pflücken von Früchten usw. Die Menge der kleinen, die Kette bildenden Doppelringe bezeichnet die Zahl der Tage, welche zum Raubzug nötig waren . . .

Den mittleren Horizontalbalken zierten Schnitzereien, welche 2 einander verfolgende Echsen darstellten, deren eine die andere in den Schwanz biss.

An den 4 Eckpfosten des Lobo hingen unverzierte Holztrommeln, cylinderförmige Frauentrommeln lagen auf dem Boden und dem Gebalk. An einem Pflocke waren eine Anzahl merkwürdiger Ceremonialstäbe, sowie 2 Lanzen mit schön ciselierten Klingen befestigt. Die vier Feuerstellen des Lobo befanden sich links und rechts von den Eingängen. Um den ganzen Innenraum zog sich den Boden wenig überragende Aussergalerien, die durch keinerlei Zwischenverschalungen geteilt waren. Diese durchlaufenden Plattformen

waren bestimmt, Gästen als Tribünen, Schlaf- und Wohnraum zu dienen.»

Although this description is long, there are many details not touched upon as for instance the foundation of the structure. Grubauer gives however a great many details concerning the movables of the lobo, but unfortunately the text does not agree with the representation of the interior of the Rato lobo. Evidently he found that there was something wrong when he could not find the center post in the representation, which ought to be there, but he dispatches the question easily by putting in parentheses »leider auf der Photographie nicht mehr ersichtlich».

The representation, however, agrees in all essential things with a lobo of Poso type, while the Rato lobo in many respects must have differed from this type, outside as well as inside. Very likely Grubauer on his flying tournée through Celebes has confounded his photoplates. What he calls the interior of the Rato lobo is actually the interior of the lobo of the village of Maboengka, not far from Rato, which he visited the same day as Rato.

If we compare the representation in question with Grubauer's description of the Maboengka lobo everything fits in perfectly.

Thus, of the four lobos in the Kalaena Valley three are more or less of Poso type:<sup>1)</sup> the lobos at Mananagaloë, at Lembongpangi, and at Maboengka. The fourth lobo, the one at Rato in the northern part of the Valley, belongs to another type of lobo.

It is evidently impossible to derive any conclusions to be depended upon from Grubauer's description as to the construction of the Rato lobo; we must content ourselves with suppositions.

<sup>1)</sup> If Grubauer's so called Rato lobo is the interior of the lobo of Maboengka, at least the floor of this lobo is different to that of a Poso lobo, the planks being placed in the longitudinal direction of the lobo, parallel to the heavy plank in the middle of the floor.

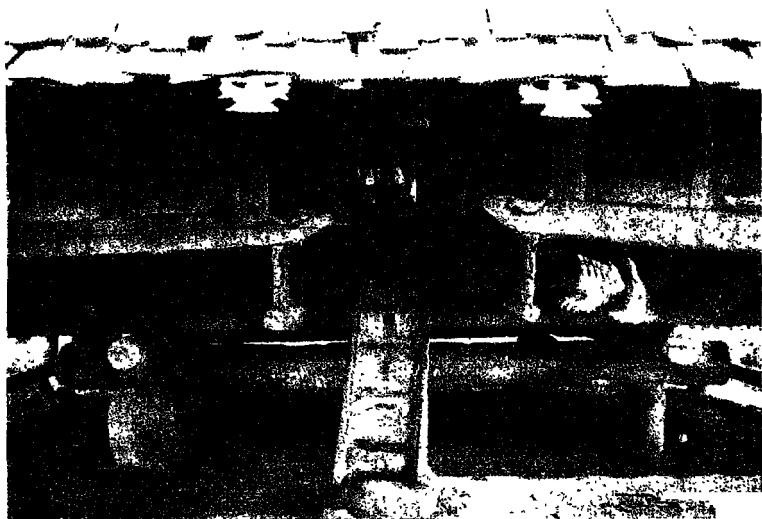
If we take for granted that his description of the Rato lobo as well as the representation of the exterior, really belong to this lobo, it seems to resemble at least three different types, that of Poso, that of Behoa as well as that of Rampi which no doubt is an intermediate structure between the Rato lobo and that of Bokoe, as will be shown in a following chapter.

To judge from the exterior the lobo resembles the Bada-Behoa type, the roofing at the gables having no openings for ventilation.

The top of the gables are ornamented in a manner that more reminds one of the other lobos of the Kalaena Valley and other temples of Poso type. A number of 4 fireplaces has according to Kruijt sometimes been found in a lobo of the Poso district. Grubauer says that the fireplaces of the Rato lobo were situated close to the entrances, but according to Kruijt they were in a lobo of this type placed in the corners. Some carvings also seem to resemble those of a Poso lobo. Especially the two lezards on the horizontal beam remind one of the crocodiles of that lobo. The interior is quite different to the lobos of Poso and Behoa, having in the center a post, used as a torture pole and at the same time as what Grubauer calls a »Lebensbaum«, a number of rods with a brush of dry grass at the top, fastened to the post.

Such a center post was never found in any lobo of Poso or Bada-Behoa type but always in the lobos of Bokoe, Kantewoe, Tole, Tobakoe and Koelawi type.

This torture pole, combined with a shallow pit with carvings all round, vividly reminds one of the lobos of Rampi, a fact which Grubauer points out.



After A. Grubauer.

Fig. 244. The entrance of the temple of Tedeboi (Rampi).

## The Bokõe type.

### Tedeboi (Rampi).

Grubauer, being the only person who has represented this lobo, describes it as follows:

»Das wichtigste Gebäude des Dorfes war die Dusunga. Gleich den andern Häusern stand sie auf einem niederen Rost aus dicken Balken. Der Eingang befand sich in der Mitte einer Längswand, und zwar innerhalb eines komplizierten Vorbaues, dessen horizontalen Balkenenden in roh geschnittene Büffelköpfe ausliefen, während 2 Strebepfeiler menschliche Figuren darstellten und zwar einen Mann und eine Frau mit stark herausgearbeiteten Genitalien. Neben diesem Eingange hingen an einer Schnur eine Anzahl Schwei-

nekiefer.<sup>1)</sup> — Aus dem Dache des Vorbaues über dem Eingange sprangen 2 in Form von Büffelköpfen geschnittene Schindeln vor. Im Vorbau selbst schwebte oberhalb der Tür unter dem Gebälk eine hölzerne Vogelfigur mit tief herabhängenden Zieranhängseln in den Krallen. Ein eingekerbter Stamm führte zur Dusunga hinan. Durch die Tür konnte man nur stark gebückt eintreten. Drinnen war es so finster, dass das Auge geraume Zeit bedurfte, um überhaupt etwas unterscheiden zu können. Es war ein verwahrloster, schmutziger Raum, der Boden mit Abfällen von wer weiss wie vielen Festmahlen bedeckt. Der Reis- oder Lebensbaum war an dem in der Mitte errichteten Hauptpfosten befestigt und reichte vom Boden bis zum Dache. An diesen Pfosten wurden, dem Reisbaume abgewandt, die auf Kopfjagden gefangenen, sowie die zum Opfertote ausersehenen Sklaven gefesselt. — — —

In einer dem Bretterbelage des Bodens eingefügten und diesen etwas überragenden dicken Planke vor dem Marterpfosten war eine hohlgeschnitzte, von zwei einander gegenüberstehenden Büffelköpfen flankierte Mulde angebracht, in welche bei solchen Ritualmorden oder nach siegreicher Kopfjagd der abgeschlagene Schädel gelegt wurde. Das Gehirn wurde unter die Männer verteilt und der Schädel später im Sparrenwerk des Daches als Opfergabe aufgehängt.

An Geräten sah ich in der Dusunga nur Trommeln der gewöhnlichen Art, aus einem fellbespannten Holzcylinder bestehend. Nicht eine davon hatte Schnitzarbeit aufzuweisen.»

This description makes it evident, that the exterior of the lobo of Tedeboi resembled that of the temple of Rato.

Here, however, we have only one entrance, placed in

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<sup>1)</sup> This is a mistake, because there is only *one* jaw of a pig. The rest are jaws of ruminants, the outermost one to the right that of an Anoa and the ones to the left those of some stags (Rusa).

the middle of one long side, differently to the Rato lobo and the Poso lobos. The description of the entrance as well as the representation gives to understand that the lobo of Tedeboi in several respects agrees with the lobo of Bokoe.

The foundation of horizontal logs, resting on stones<sup>1)</sup>, the buttresses, supporting the platforms at the entrance, the construction of the walls, the post in the center of the structure, everything is just the same as in the lobo of Bokoe.

About the construction of the floor, the platforms, the fireplaces, the floor frame etc. we do not know anything.

<sup>1)</sup> The gable platforms however have here special props at the outside, differing in this respect from the lobo of Bokoe.



## The Bada-Behoa type.

### Leboni.

This lobo belongs to the type which I have called the Bada-Behoa type. Having not seen that lobo myself, I shall only have to quote literature concerning it.

The first Europeans who saw the lobo of Leboni were the Sarasins during their journey from Paloe to Palopo in 1902. They have described it and represented it. Later, in 1911 Grubauer visited this lobo which he also describes and represents. Below I shall quote first the Sarasins and then Grubauer. The Sarasins write as follows:

»Wir durchschreiten die Eingangspforte und sehen uns innerhalb eines Dorfes, in dessen Mitte der Lobo durch besondere Mächtigkeit auffällt. . . Wir folgten nun dem Tomakaka von neuem nach seinem Dorfe und nahmen für's erste den merkwürdigen Lobo näher in Augenschein. Dieser hiess hier Dusunga, und ist ein solides Holzpfehlwerk. Das innere zeigte ungefähr folgende Bauart: Es stellt einen grossen, freien Holzboden dar, nicht durch Säulen unterbrochen, welcher umrahmt wird von einer theaterartigen Einrichtung; den beiden Langseiten und der einen Giebelseite folgend, ist eine schmale und dem Abfall des Daches entsprechend, niedrige Abteilung angebracht, in welcher bei Festlichkeiten die Zuschauer und die fremden Durchreisenden Platz nehmen. Sie ruht auf Balken, welche über die senkrechten Hauspfähle vorkragen, so eine art von Galerie um das Haus herum bildend. Diese Seitenräume sind vom Hauptraum durch senkrecht und horizontal gerichtete Bretter abgeteilt, welche eine successive Reihe von grösseren Öffnungen freilassen, wonach die ganze Einrichtung etwas an Teaterlogen erinnert. Die senkrechten Bretter, welche die Logen trennen, tragen als Versierung Reliefs von Frauenleibern, die aber sehr verdorben sind. Von der



After P. and F. Sarasin.

Fig. 245. The temple of Lebani.

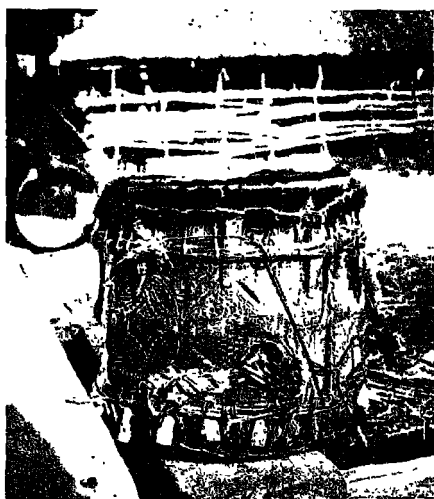


After A. Grubauer.

Fig. 246. Interior of the temple of Lebani.

Decke in der Mitte des Lobo hängen Trommeln herab, unter denen uns ein alt ehrwürdiges Stück besonders auffiel, mit reich geschnitztem, aus einem Stamm gehauenen Holzcyylinder; das Trommelfell war Anoahaut. Diese grosse Trommel konnte man mittelst einer Rolle herabsenken und hochziehen, wobei ein Stein als Gegenwicht diente (Fig. 247).

Statt des Martei:pfales in der Mitte des Gebäudes sahen



After P. and F. Sarasin.

Fig. 247. Temple drum from Ieboni.

wir an der Hinterwand einen von dürren Blätterwerk verdeckten Pfahl, in dessen Nähe ein Paar Menschenschädel hingen; seitlich links davon standen zwei ganz roh geschnitzten Holzfiguren, Mann und Weib darstellend; das Haar der Figuren war durch aufgesteckte Skalpstücke vertreten. Es seien zwei berühmte Vorfahren gewesen, der Mann mit Namen Lasandu, die Frau Bambawalo.

An einer Stelle an der Lobowand hing ein ganz frisches Skalpstück, es sei ein Geschenk des Radjas von Bada an den Tomakaka von seiner letzten Kopffjagd.»

If we compare this account with that of Grubauer we shall find that the lobo had changed very little during the 9 years which had passed since the visit of the Sarasins, although this had been a period of many changes to Central Celebes. Grubauer writes:

»Nach Beendigung meiner Einkäufe machte ich mich daran, das wichtigste und grösste Gebäude der Ortschaft, die schon mehrfach erwähnte Dusunga, einer gründlichen Besichtigung zu unterziehen. Die Stützpfeiler waren an der Vorderseite mit grobem Schnitzwerk versehen, und zwar zeigte der eine stilisierte Büffelhornornamente, der andere eine Eidechse (Krokodil). Eine recht unbequeme Treppe, aus einem dicken halbierten Baumstamm mit flachen Auskerbungen bestehend, die beim Hinansteigen ein seitliches Stellen der Füsse erforderten, führte zum inneren hinauf. Oben befand ich mich in einem hohen rechteckigen, fensterlosen Raum, der sein fahles Zweilicht durch die schmalen Lücken zwischen Dachrand und Gesims, sowie durch die vielfach geborstenen Dachschindeln empfing. Dem wurmstichen Äusseren des Geisterhauses mit seinem grünbemoosten, stark vervitterten Schindeldach entsprach auch das Innere. Der Bodenbelag bestand aus dicken schweren Bohlen, die schlecht und lose aneinandergesetzt waren. In denselben hatte man zwei Feuerstellen ausgespart, über welchen sich pyramidenförmige Bambusgestelle aufbauten. An ihnen waren je zwei Holztrommeln aufgehängt, drei grössere und eine kleine. Alle wiesen ungefähr die bauchartige Bierfassform auf. Die Trommelfelle bestanden aus Anoahaut. — — — Die grossen Trommeln schweben für gewöhnlich an Rotangseilen in der Luft und werden nur an Festtagen zum Gebrauch herabgelassen. Eine fünfte, uralte Trommel ganz anderer Form, einen langen, engen Holzcyylinder darstellend, befand sich oberhalb der seitlichen Nischen neben dem Eingange. — —

Rings um den Mittelraum des Geisterhauses zogen sich über das Hausgerüst hinausragende Galerien, die der

Schrägstellung des Daches entsprechend ziemlich niedrig waren. Durch horizontal und vertikal gestellte Bretterverschalungen hatte man diese in einzelne Nischen (Logen) verwandelt, welche bei festlichen Anlässen den Frauen und Kindern oder fremden Besuchern zum Aufenthalte, letzteren auch als Schlafräume dienten. An den Seitenstreben der einzelnen Abteile waren in primitiver Schnitzarbeit Frauenbrüste herausgearbeitet, welche als Sinnbilder der Fruchtbarkeit zu deuten sein dürften. Als Logenabschluss lief rings um den oberen Rand der Galerie ein Bretterbord zum Zwecke der Unterbringung der von den Gästen oder Zuschauern mitgebrachten Gegenstände.

Das eigentliche Heiligtum der Dusunga befand sich an der hinteren Schmalseite des Hauses gegenüber dem Eingang. Am mittelsten Pfosten dortselbst, oberhalb der Logenbrüstung, war der Lebensbaum, auch Reisbaum genannt, aufgestellt. In der Form eines riesigen Makartsbuketts aus Gräsern und Schilf zusammengesetzt und bis an den First des Daches über die seitlich darunter schwebenden hölzernen Vogelfiguren hinausreichend, stellt er das bedeutsame Symbol des Wachstums und der Fruchtbarkeit dar, vor allem wieder in bezug auf den Reis. — —

Zur Rechten und zur Linken des Lebensbaumes standen zwei plump geschnitzte, lebensgrosse menschliche Figuren: berühmte, unter die Götter versetzte Vorfahren. Es sind dies die einzigen figurlich dargestellten Gottheiten der Lebonier, und zu ihnen beten sie vertrauensvoll in allen Lebenslagen. Der männliche der Dewatas heisst Tangilando, der weibliche Bambawalo. Ehrwürdige, dicke Staubschichten lagerten auf den Figuren, deren Gesichtszüge unkenntlich machend. Die Genitalien der Gestalten waren zur Versinnbildung der Vermehrungskraft abnorm vergrößert dargestellt.

Seitlich über den Gottheiten schwebten die bereits erwähnten 2 Vogelfiguren mit lang herabhängenden Bauch-

zieraten. Diese Adler vorstellende Bildnisse wurden 'alo' genannt.<sup>1)</sup> . . .

To judge from these two accounts, the Lobo of Leboni was built in the same manner as the lobo of Doda, only differing in details, such as the number and the position of the fireplaces.

### Bada, Behoa, Napoe, in general.

If we travel from Leboni toward the north we subsequently arrive in the districts of Bada, Behoa and Napoe, where still a number of temples are found, very likely of the same construction as the lobos of Doda and Hangira in Behoa and of Boelili and Gintoe in Bada which I have seen.

As I myself have only studied the lobo of Doda, I shall below quote the accounts of literature concerning the temples of these districts.

Schuijt is of the opinion that all the temples of the three above mentioned districts resemble each other. Consequently he comprehends them all in the following account. He says:

»Zulk een geestenhuis vindt men hier evenals vroeger in de Possostreek, in elk dorp. Het onderscheidt zich van de andere huizen door forscheren bouw en door een bijzondere trap, deze is n. l. altijd vervaardigd van een in de

<sup>1)</sup> I am not convinced that these so called birds really were birds, as there is no representation. In a big house at Gimpoe I saw a similar object, like the horizontal new moon of the tropics, adorned with a great many pieces of wood, hanging down from it. This was meant to represent the moon, according to the natives. Anyhow I doubt that *alo* means eagle, because in Koelawi, Kantewoe, Tole, and other places *alo* was the native name of the big Buceros.

lengte middendoor geklooften dikken boomstam, die zoodanig is uitgehold dat de treden zijn uitgespaard. Veel al is zulk een trap van dieren- en menschenfiguren voorzien en ook binnen in 't geestenhuis ziet men gewoonlijk op de wanden geteekende of uitgesneden menschenfiguren. Het inwendige van de geestenhuisen in Napoe, Besoa en Bada kommt in hoofdzaak overeen met die der gewone woonhuizen. Om een haardvuur in 't midden is een vierkante ruimte voor 't uitvoeren van ceremonieele dansen; daaromheen zijn verhoogingen aangebracht waarop toeschouwers een zitplaats kunnen vinden en die door vreemdelingen, die steeds in 't geestenhuis overnachten, als slaapplaats kunnen worden gebruikt. De versieringen in de geestenhuisen bestaan uit de zoo even genoemde teekeningen, uit een groot aantal buffelhorens van de buffels die op de verschillende feesten zijn geslacht en van een groot aantal ringen van rotan geflochten, die aanduiden hoeveel koppen er gesneld zijn, waarboven gewoonlijk bij wijze van tropée een dikke bundel bebladerde takken van de *Caryota Rumphiana* is gestoken.»

Further Schuijt observes that these temples in some respects are different to the temples of the Poso district. They have for instance no carvings representing crocodiles, and as a rule no inner roof. He writes:

»... deze dingen (a double roof and carvings representing crocodiles) ziet men in de geestenhuisen der berglandschappen niet, uitgezonderd de lobo van Lamba in Napoe, waar we het dubbele dak wel aantreffen».

Among the movables of the lobos he mentions a kind of chair, made of a single log, having a low seat and a rather high back. Simple chairs of this kind were found in every temple, and chairs with carvings on the back in the Lampa lobo in Napoe and in one of the four lobos of Boelili in Bada.

These chairs, two from Lampa and one from Boelili, Grubauer succeeded to obtain (Fig. 249). The rest have all vanished.

## Bada.

I have already quoted the reports of Schuijt and Kruijt concerning the temples of this district. The Sarasins as well as Grubauer have visited this part of Celebes and have a few things to tell us about the temples. The Sarasins seem only to have seen a lobo at Badagajang (= Badangkaja) and about this they write:



After P. and F. Sarasins.

Fig. 248. The staircase of the temple of Badangkaja in Bada.

»Wir betrachteten darauf den Lobo des Dorfes, dessen Pfosten und Seitenbretter mit rohen Schnitzereien verziert sind; dabei bildet der Büffelkopf das Hauptmotiv, aber auch Schweinsköpfe sind dargestellt, so dann links von der Eingangspforte ein Ithyphallus; die Darstellung der Geschlechsteile gilt hier nicht für anstössig. Eine wunderlich geformte Treppe führt hinauf (Fig. 248), sie ist kahn-



förmig mit tief eingehauenen Kerben als Stufen . . . Sie ist ein altes Stück aus einem Baumstamm gearbeitet, die Seitenteile oben in zwei lange Handhaben auslaufend, zwischen deren Ansatzstelle das Oberkopfmotiv<sup>1)</sup> sich angebracht findet. Dieses selbe ornament sehen wir auch noch deutlicher an dem gleichfalls auf dem Bild zur Darstellung gekommen Eckpfosten des Gebäudes dargestellt. Im inneren viel uns auf, dass der Marterpfahl in der Mitte fehlte; dagegen fand sich an der Hinterwand ein dickes Büschel von dürrer Pflanzenwerk aufgehängt, unter welchem, als wir es weghoben, ein sehr roh geschnitzter Frauenrumpf verborgen stand; dies dürfte die Marterstelle sein, denn allenthalben am Lobo sahen wir Skalpstücke festgesteckt.»

In his paper of 1909 about Bada, Kruijt has scarcely anything of importance to tell about the construction of the temples. He only mentions that they are like the temples of Napoe and Behon and called doehoenga. As a rule the wood carvings are not so numerous as those of the Poso type. An exception was the temple in the part of the village of Bada mpoe'oe (Badangkaja) that was called Loebi, this temple having on both sides of the poles of the foundation carvings representing a buffalo's head. These carvings were also found on the walls and on the staircase of the north side of the temple. Inside there were hanging buffalo skulls with big horns and the lower jaws. At the northern main post were fastened some leaves («bladstengels») of the aroeroe palm, serving as an abode of the spirits («anitoes»).

Of more interest is what Kruijt has to tell us about the three old most important villages of the district: Bada mpoe'oe (= Badangkaja), Boelili, and Gintoe. Boelili had 4 temples, Badangkaja and Gintoe each 2. In most villages there was only one temple. As to the number of the temples in the three big villages the natives declared that these

<sup>1)</sup> See page 320.

villages from olden times were divided into a number of sections each of which should have a temple of its own.

Boelili rightly consisted of 7 sections, Badangkaja of 3 and Gintoe of 2. That there was not always a corresponding number of temples was according to Kruijt owing to the fact that some sections had declined so that the inhabitants were not able to keep a lobo of their own.

How it came that the villages consisted of several sections Kruijt explains in the following lines:

»Gevraagd naar het ontstaan van deze verschillende wijken, die elk een aantal van huizen tellen, vertelde men mij, dat de eerste bewoners dier dorpen hunne huizen een naam gaven: toen de familie van die eerste bewoners zich uitbreidden, moest men zich in verschillende huizen vestigen, maar iedere groep van huizen bleef men toch met den naam van heet eerste huis aanduiden.»

Some years later when Grubauer visited these districts there were no less than 7 temples at Boelili. At Badangkaja he found 4 temples. When I visited this place in 1918. I was told that there at some time had been even 5 temples.

Schuijt tells us that there were four temples in Boelili and the same number in Bada mpoe'oe which is the same village as Badangkaja. He writes about one of the Boelili temples as follows:

•  
»Eén van de geestenhuizen van Boelili heeft aan de buitenwand nabij de trap op hout uitgebeelde menschenfiguren, op één waarvan nog enkele stukjes schalp vastgehecht zaten. In dat geestenhuis vonden we een zitbankje met een hoogen rug er aan, op de achterkant waarvan vrij sierlijk een vrouwenfiguur was uitgebeeld.»

Grubauer has written a little about the lobos in Bada. About the temple of Lelio he only says as follows:

»Die sich im inneren des Gebäudes an den Wänden entlang ziehenden Galerie-Plattformen waren ziemlich hoch angelegt, so dass ich sie, auf meinem Feldbette sitzend, bequem als Tisch benutzen konnte.»

He says there were no less than 7 lobos in the village of Boelili one of which he used as his night quarters. This lobo was in bad condition and seems to have been built



After A. Grubauer.

Fig. 249. Temple chair from Boelili (Bada).

in the usual manner (probably this refers to the lobos of Behoa and Napoe). He says:

»Der von mir als Quartier erwählte Lobo zeigte die übliche Einteilung. Ein kanoeartig ausgehöhlter Stamm mit Kerben und in Tierköpfe auslaufenden vorstehenden Enden führte zum Inneren hinan. Ein Gräserbouquet stellte den Lebensbaum vor. Fesselringe hingen im Hinter-

grunde, und in einer der Seitengalerien lehnten etwa 20 Stück stark defekter Muschel-Langschilde.»

At Boelili Grubauer got a lobo chair, as I have already



After A. Grubauer.

Fig. 250. Staircase of the temple of Gintoe (Bada).

mentioned, but he does not tell to which lobo it belonged.

Finally he mentions the lobo of Gintoe the construction of which evidently was so peculiar that it no doubt

would have been worth the while to describe it carefully. He says however only the following:

»Ein uralter Lobo wies gleichfalls eine hauliche Eigenart auf, indem er aus zwei ineinander geschobenen Häusern, einem Vor- und einem Hauptbau, bestand. Ersterer diente als Fremdenlogis, letzterer war das Geister- und Beratungshaus des Dorfes. Reiche Schnitzereien am Gebälk wie an der Treppe zeichneten diesen Lobo vor anderen aus.»

As we see in Grubauer's representation of this lobo the staircase (Fig. 250) exactly resembles that of the lobo of Badangkaja near by, represented by the Sarasins. Both lobos seem in this respect to agree with the lobo of Doda.

### Behoa or Besoa.

About the construction and appearance of the temples of this district almost nothing is written. Grubauer says only about the village of Lempé:

»Dieser Kampong nannte einen Lobo sein eigenen, dessen Charakter aussen nur die geschnitzten Eichen, sowie eine riesige Alarntrommel im Inneren verrieten.»

He also visited the villages of Bariri and Doda, but he does not mention the temples.

### Napoe.

Of the village of Lamba in Napoe and its temples, Kruijt has given a rather detailed account from his visit to these districts shortly after the opening of the country by the Dutch military. The village was generally only inhabited at the occasions of the great sacrificial feast, especially the

feast of the dead. It was once a very big village, but at the time of Doctor Kruijt's visit it only consisted of some 20 houses and 3 temples. About the latter (Fig. 251) he writes as follows: . . . »de grootste heet Howa. Alléén deze heeft den



After A. Gruhauer.

Fig. 251. Tempel at the village of Iamba (Napoe)

ingang aan de oostzijde. De trappen der tempels bestaan in Napoe en Besoa alle uit een halven (in de lengte gespleten) boomstam, die zodanig is uitgehold, dat er treden in overgelaten zijn. Het bovineinde van de trap in Howa en in enkele andere tempels, is aan beide zijden versierd met een uitgesneden paardekop. Howa is 16,60 M. lang en 11 M. breed; in de rondte langs de wanden (of eigenlijk langs het dak) zijn

twee rijen verhoogingen aangebracht, waar de feestvierenden of gasten kunnen slapen; ook zijn er vijf haarden. Men vindt hier ook een dubbel dak evenals in de Posso'sche lobo's. De krokodil-figuren, zoo karakteristiek voor de Posso'sche tempels, vond ik echter in Napoe and Besoa nergens. Ook mist men in deze tempels het rek wooraan de fragmenten van de schedels der verslagen vijanden hangen; daarvoor in de plaats hangen aan de buffelhorens waarmee de palen verzierd zijn, ontelbare hoopen rotanringen (tikole's). . . . aangevende het aantal keeren, dat men er op is uitgeweest om vijanden te dooden. Verder vindt men in deze en de andere lobo's een groot aantal grootere en kleinere trommen. In Howa bevindt zich een van bijzonder groote afmeting; zij heeft een lengte van 77 bij een middellijn van 67 c M.

Aan en haak hangt verder een stuk karbouwenhuid, . . . In het midden is een rond gat gesneden, waardoor het hoofd kan worden gestookt.» In another paper he says that the natives called it hoemba (Fig. 253).

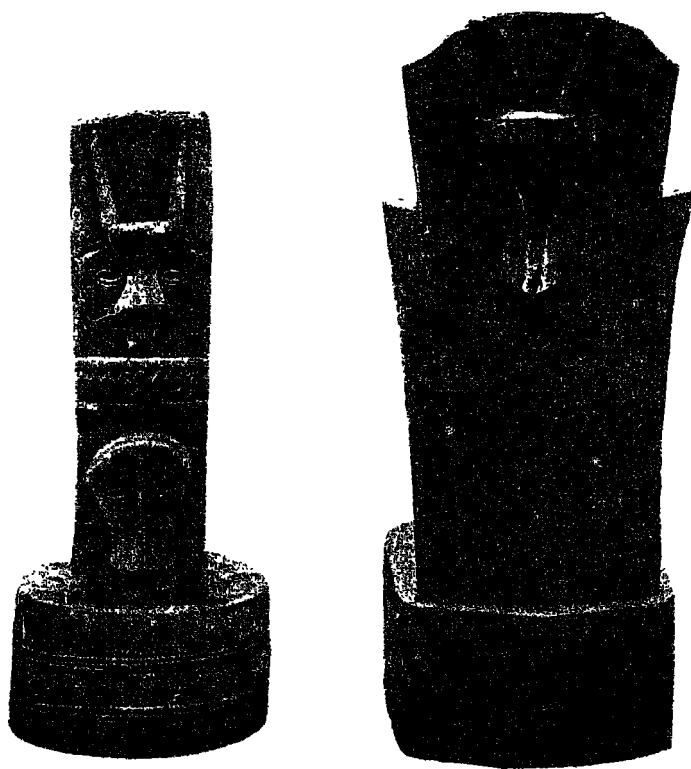
About the two small temples Kruijt writes the following: »De beide andere lobo's zijn nagenoeg even groot. De eene die Limbo heet is 12,5 M. lang en 7,8 M. breed; de tweede, Bide, 11 bij 6 M. breed.»

Among the movables of the temple of Limbo he mentions no less than 5 chairs, each made in one piece of wood (Fig. 252). These chairs were in the Napoe language called *todanga* which means seat. In the two small temples also were found the ratan rings called *tikole*, although not in such a great number as in the *howa*. In the temple of Limbo there were besides a great collection of »voorbehoedmiddelen», magical objects taken from fallen enemies.

As to the temples of Behoa, Schuijt has no special details to give us, but about the three temples of Napoe he writes:

»Het grootste der drie geestenhuizen heet *Howa* en is ten gebruike van het geheele Napoevolk. De twee kleinere zijn't bezondere eigendom van twee afzonderlijke geschlech-

ten. Onder Howa bevindt sich, aan de balken bevestigd, een kistje met de beenderen van een dapperen voorvader, *Goema ngkoana* geheeten, — — —»



After A. Grubauer

Fig. 252. Temple chairs from Lampa (Napoe).

Further he writes:

»In één der geestenhuizen vonden we ook een aangekleed afgodsbeeld, in een hoek geplaatst, zoo dat 't haast niet op te merken was.»



According to Schuijt the temples of Napoe as a rule were called doehoenga.

Grubauer has nothing to tell us about the lobos in Napoe, but he has a representation of a temple at Lampa. To judge from this representation it resembles in some respects the lobo of Doda, in other respects evidently the lobos of Poso type. The high pointed roof and the ornaments at the gables remind us of Doda, the foundation, the walls of the platforms, and the opening of the gable roofing of the Poso type.

Possibly this is the same lobo, mentioned by Schuijt as having a double roof like the Poso lobos. If this is the case, the representation cannot be used as an example of a typical Napoe lobo.

### Unknown type. Tawaelia.

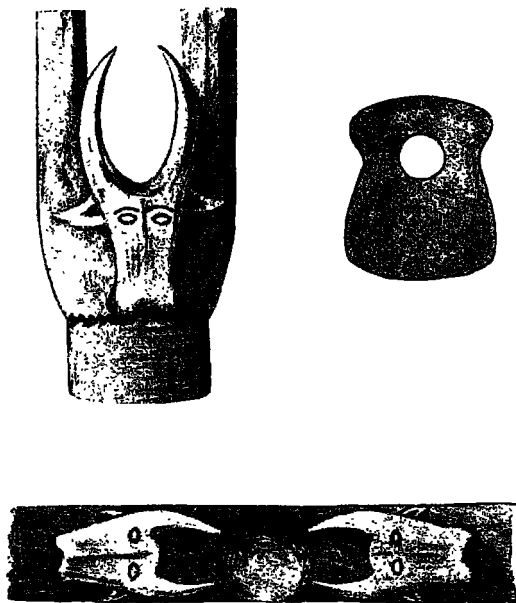
In the little district of Tawaelia north of Napoe, there was according to Kruijt a lobo, but what he tells us about it, cannot give us an idea of its construction. About the chief village Bola and its temple he says:

»Hun eigenlijk dorp ligt op een niet hoogen berg aan den oostkant van het dal: het bestaat uit 7 huizen (waarvan twee nog als lobo gebruikt worden), een groote rijstschuur, en de hoofdlobo. Ik vond dit dorp, . . . omringd door eene sterke heining met een paar stevige poorten.»

Besides Kruijt mentions that formerly there was an old lobo, adorned with a pair of preternatural buffalo horns. This temple as well as the horns had, however, been the prey of the flames. In the lobo that Kruijt saw in 1907 there were another pair of uncommonly big buffalo horns. About the temple itself he has only a few words. He writes:

»In de lobo trekt de aandacht de middenpaal, die ge-

maakt is uit een in twee stammen opgegroeiden boom; bij het punt, waar deze gaffel der twee stammen begint, heeft men aan beide zijden zeer kunstig een karbouwenkop uitgehakt (Fig. 253); ook in den balk, waarin deze middelpaal



After Kruijt.

Fig. 253. Wood carvings from the temple of Tawaelia. To the left, part of the main post of the temple; to the right a leather jerkin; below, the plank supporting the main post.

rust, zijn aan de weerszijden karbouwenkoppen uitgehouwen» (Fig. 253).

To judge from these lines the temples of Tawaelia may to a certain extent have agreed with the temples of Pipikoro. The presence of a center post, standing on a heavy plank adorned on both sides of the post with carvings representing buffalo heads speaks for this presumption.

As Kruijt does not expressly say that this post rests on the floor, it may be that the post is the so called

*toemampoc* of a Poso temple. What makes me believe that this might be the case is that Kruijt in a note at the foot of the page says that there was the same kind of post in the big temple of Lamba. . . . »ook in den grooten tempel te Lamba dient een in twee stammen opgegroeide boom tot middenstuk, maar deze is niet bewerkt», and Schuijt when he describes the temples of Bada, Behoa and Napoe in general, says that there was a fireplace in the center of those temples. We are thus in suspense as to the type of the temple in question.

Among the movables of the temple he only mentions a great number of *tikole*, ratan rings.

## The bentaja.

In connection with the temples we sometimes find a house, by the natives called *bentaja* as in the villages of Mopahi, Peana and Onoe. Time did not allow a closer study of these structures.

The bentaja of Onoe was of rather late date and chiefly used as quarters for travellers, but was very likely sometimes used for religious purposes as the village did not possess a lobo. It was a small structure, built almost as a common dwelling-house. The foundation was rather low, made of a few layers of logs. There were no proper platforms, but round the floor a low shelf or bench. As there were no walls at all, a rather wide open space was left between the shelf and the roof. In the middle of the floor, made of planks, there was a fireplace. The entrance was at the south gable.

The bentaja of Peana was no doubt rather old. Although it was bigger than that of Onoe, it resembled this house in several respects. The foundation consisted of some layers of logs, the floor was made of planks, surrounded by a low shelf, resembling the platforms of a lobo, and in the center of the floor there was a fireplace. Outside the shelf there were a number of rather long poles, supporting the roof. Some of these poles had the shape of a plank, resembling the vertical wall planks of a lobo of Kantewoe type. They were placed on the top layer of the foundation. In this bentaja I found low walls, made of planks, bound to the upright wall planks. There were 2 entrances, both at the north long side near the shelves of the gables which very nearly turned toward the east

and the west. The roof was covered by big shingles, just as in a lobo.

At each side of the entrance the planks forming the door posts were ornamented with carvings in the shape of



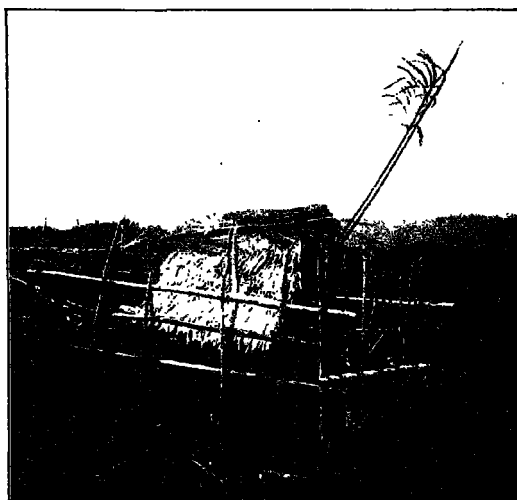
Fig. 254. Plank in the bentaja of Peana, carved in the shape of a man. (W. Kaudern's collections.)

human beings, very badly damaged however. At the opposite side I found a plank, somewhat broken, tied to a pole as a kind of prop, carved in the shape of a man, wearing on his head an adornment like a pair of buffalo horns (Fig. 254).

The bentaja was used much in the same way as the

lobo, that is to say the natives celebrated their religious feasts in this house and invoked the spirits for instance in case of illness. It is the custom of the country that way-faring people take up their quarters in the bentaja as well as in the lobo. The great religious feasts however are not celebrated in the bentaja but in the lobo.

The bentaja of Mopahi resembled very much that of Peana, but was in a state of decay. The flooring was here not of planks but of bamboo laths. There was only one entrance, situated at the north gable.



W. Kaudern Photo.

Fig. 255. A little shed, put up for the evil spirits, outside the village of Oentoebœloe in Tamoengkolowi.

### Spirit houses.

As I already mentioned a native when he thinks there is an evil spirit after him, puts up a little shed, placing in it an offering of some tobacco or betel in order to dispose the spirit in his favour. Beside these miniature sheds we now and then near the villages find a simple house of the height of a man. It is built of rather heavy poles, supporting a common two sided roof. There are no walls at all, but a floor about 75 cm. above the ground. Here the natives present their offerings in order to keep off the evil spirits. I noticed such a shed in the neighbourhood of Boladangko in Koelawi. The one represented in Fig. 255 stood just outside the village of Oentoebœloe in Tamoengkolowi.

## Tomb-houses.

Formerly the natives at many places used to bury their dead underneath the house where they had lived. Especially at the village of Kantewoe I saw the skulls and bones of the dead issuing out of the ground. When the Dutch became masters of the country they forbade the old habit of burying the dead underneath the houses. At present the dead as a rule are buried outside the village where a little house is put up on the spot where they have found their last rest.

In the center of the village of Peana there stands a little shed like the one in Fig. 22 B. The only difference is that here we have a pole in the center of the house. At this pole were hanging a number of small bamboos, said to contain food for the spirits of the dead. The natives said that in this shed were buried persons, belonging to the »royal» family.

Outside the village of Kantewoe there was as well as in Koelawi a special burial ground for great people (Fig. 256). On the top of the grave was built a small house. In Koelawi the framing of such a tomb-house resembles that of the shed C in Fig. 22. The only difference is that the bars at the bottom of the roof are not tied to the poles but rest on the top of them in a crotch. The poles are 6 in number of a man's height, 3 at each gable.

The poles are joined by a frame of 4 bars, placed half way between the roof and the ground. Below the frame are fastened a great number of bamboo bars, forming a wall round the lower part of the shed, enclosing a little room where the natives place a few things considered ne-



cessary to the dead: a mat, a cooking pot, some food etc. On the top of the shed is a roof of bamboo.

In the district of 'Toro I also noticed tomb-houses, indicating the place where a maradika (noble) was buried, but here the structures were smaller and less carefully made than in Koelawi.

The tomb-house of a common citizen was much simpler than the one above described. Near the village of Soeng-



W. Kaudern Photo.

Fig. 256. Tomb—houses of the nobles in Koelawi.

koe for instance those houses were made as the shed A in Fig. 22, only with the difference that the poles of the tomb-house were only a couple of feet high.

To judge from Grubauer's representations of tomb-houses at Lampa in Napoe, there was in this district too a certain difference between the tombs of the maradikas, the common free men, and the slaves. The tombs of the noble resemble the room, enclosed by walls of bamboo of

a Koelawi tomb-house, that of a slave is like a sawing-jack (Fig. 257).

Moreover Grubauer says there was a so called »bone-house» at Lampa, only consisting of a roof, standing on the ground. This house was only used at the great feast



After A. Grubauer.

Fig. 257. Tombs of some nobles and of a slave at Lampa in Napoe.

celebrated, with an interspace of some years, in honor of the dead.

Very likely this is the same house that Kruijt saw some years before (in 1908). He writes:

»In de nabijheid der groote lobo staat een van alle kanten zorgvuldig dichtgemaakte hut.»

Further he says that by means of a small opening in the roof he could see that inside there was a big coffin. It

was about 3 m. in length, 1 m. high, and 1 m. broad. The ends of the coffin as well as of the cover were ornamented with wood carvings, representing the buffalo's head. Beside this huge coffin there were three other coffins of common size.

## Fortifications.

Before the Dutch became masters of the country the Toradja tribes of Central Celebes used to fortify their villages which was necessary as the tribes were always fighting.

The defensive works were sometimes independant fortresses, situated for instance in a mountain pass or at some other point of strategetic importance.

Any fortified place is in the malay language called *benteng*, but in Central Celebes the *ng* at the end of the word is left out. The word is thus only *bente*.

The fortifications chiefly consist of hedges of so called iron bamboo, sometimes planted on banks of earth. Now and then we find an earth bank inside the hedge.

Independant fortresses I have only seen twice, one near the village of Winatoe, another on Boeloe Momi (boeloe means mountain in the Koelawi language) a little south of the village of Toewa. Both fortresses are situated on a hill, surrounded by hedges of bamboo, at Winatoe growing on the top of a bank of earth.

According to the natives there was formerly when the tribes of Koelawi and Lindoe constantly were on the war path, in the Sibaronga chain which separates Koelawi from Lindoe, a similar fortification.

On the north slope of the Bolapapoe hill in Koelawi there was still in 1918 an almost square benteng, protecting the village of Panapa against a charge from the north. This benteng had been made with great care, the bamboo hedge being planted on a bank of earth at the bottom of which I found a foundation of blocks of stone.



W. Kaudern Photo.

Fig. 258. Western entrance of Kantewoe.



W. Kaudern Photo.

Fig. 259. Northern entrance of Kantewoe, seen from the village.

Very likely every village of importance in Koelawi as well as in Pipikoro formerly was more or less fortified, which may have been the case with most villages all over Central Celebes. In Koelawi we know for certain that the villages Panapa-Bolapapoe and Boladangko were fortified.

Among the fortified villages of Pipikoro, Kantewoe was perhaps the strongest one. In 1918 when I had my quarters at the village for a couple of months, it was still almost in the old state. The village is situated on the top of a high mountain, like an Akropolis, with a splendid view. An enemy advancing toward the village, was discovered by the inhabitants hours before he was there, but a person approaching the village cannot see it until the very moment he stands in front of an almost perpendicular bank of earth surrounding it. There are 2 entrances, dugged out through the roots of two huge fige trees (Figs. 116, 258, 259). Beside these two entrances, one in the north, another in the west, there was formerly at least one more at the east end of the village, at present filled up with stone blocks and earth. At the bottom of the bank runs a narrow offset, and below the slope of the hill there is a protecting thicket of bamboo.

The villages of the districts of Tole and Tobakoe seem also formerly to have been fortified although less carefully than Kantewoe. As a rule they were only more or less fully surrounded by hedges or thickets of bamboo as for instance the villages of Lawe and Siwongi.

In Koelawi the fortification of Bolapapoe which resembled that of Kantewoe, probably had had one entrance in the north and another in the south. Possibly there had been a third entrance in the west where the village was protected against an ennemy not only by a bamboo hedge but also by an earth bank. In 1918 this old benteng was in a state of decay.

In the district of Bada I saw many a fortified village some of which had their bamboo hedges and earth banks

in good condition as the villages of Boelili and Bomba. At Kageroa the bank was in rather bad condition. Strangely enough the bamboo hedges on top of an earth bank, 4 or 5 m. high, was still in 1918 remaining round the old village of Toeare which was abandoned by the natives.



After P. and F. Sarasin.

Fig. 260. Gate in the wall, surrounding the village of Bangkekae in Bada.

Further to the north on a plateau half way to Bokoe I found close to each other two almost circular banks, about 1 m. of height, overgrown with bamboo, no doubt the remaining fortifications of the former village of Pandanglolo, belonging to the district of Bada.

According to Grubauer the villages in Napoe were fortified in the same manner as well as the villages south of Bada, for instance in Leboni. The village of Tedeboi in

Rampi was protected even by two banks, overgrown with bamboo, encircling the whole village.

I never saw any gates or doors by means of which the entrance of a village could be shut, but very likely there had formerly been such ones to judge from the Sarasin's representation from Bangkekaoe (Fig. 260).

Now and then we find in these districts a circular hedge of bamboo, sometimes even strengthened by an earth bank, used as an enclosure for the buffalos. This was for instance the case in Bada just south of the village of Gintoe.

Also in Koelawi at the village of Lili there is a similar enclosure which was said to be used for keeping buffalos, but possibly it never the less originally had been a benteng.



## Summary and Comparisons.

### A. Dwellings and paddy barns.

In the construction of the temporary dwellings we cannot trace any foreign influence, but the study of the permanents dwellings and the paddy barns gives us to understand that among the house types of N W. Central Celebes there may be some type that has not originated in the country.

The type of house that surely is borrowed from abroad is the one which I have called the Koelawi house 'C'. The construction of this house is quite different to that of all other structures in the highlands of N W. Central Celebes. The type is only found in Koelawi, and there are only a few specimens at the villages of Panapa and Bolapapoe. These houses were said to be of rather late date, probably built after the heavy earthquake in 1909 when several villages were more or less damaged and the village of Lemo just north of Panapa quite destroyed.

This house type, however, is the most common one in the Paloe Valley, and no doubt the natives of Koelawi have got the model from their neighbours in the North, but it may be that it is of Chinese origin. It is found all round the coast of Celebes, although here and there somewhat altered, but still easily recognised, at all places where Mohammedanism has got a footing among the natives, spread to them by the Boegeneseš.

In some districts the habit of making a foundation like that of the Koelawi type C, from the coast has spread to tribes, living in the interior of the country. Among the Saadang Toradjas this method of making a foundation seems to be

rather common even as far as in Sekopada. But from this district it has not spread to the adjacent districts of Benahoe or Rampi. Outside of Celebes it is found in many places in the Dutch East Indies.

Among the other house types of Koelawi, the type A and the open paddy barn, the so called paningkoe, seem to be a primitive type, developed from the simple shed. They may thus be considered as properly native structures.

Lacking walls, the paningkoe is as I already pointed out, closely attached to the temporary sheds of type C. The dwellings of type A have walls made of plaited bamboo, tied to the poles supporting the bar at the bottom of the roof. These houses are somewhat different, if we come to the districts south of Koelawi. In Tole for instance, the house has very often a veranda, level with the floor. This is never the case in Koelawi. If there is a veranda it is always a special structure, added to the house, with a floor on a lower level (Fig. 261).

The bamboo plaiting is somewhat different in different places (Fig. 31).

The other structures, the Koelawi house of type B, the Lindoe house, and the paddy barn called gampiri, do not seem to have any direct connection either with the primitive Koelawi house of type A, or the more developed type C in the construction of the foundation and the walls. I never saw any houses forming a transition from the Koelawi house B to any other type. The same was the case with the gampiri.

Under these circumstances it seems most likely to me that this type of dwellings, represented by the Koelawi house B and the gampiri, has not originated in the districts of N W. Central Celebes where they predominate nowadays, but is imported. But from where? That is a question difficult to answer. In the adjacent districts this type of house is not found, and in the Poso district dwellings as well as paddy barns are of much simpler construction. The Saa-

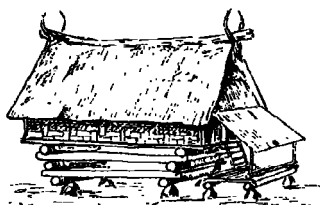
dang Toradjas make strong houses and barns with walls of boards; the construction, however, is quite different, but extremely like that of the Koelawi house of type C. Nor have I found any houses corresponding to the Koelawi house B in the peninsulas of Celebes. Either the houses in these districts are much simpler, or they are more like the Koelawi house C. The model of type B thus probably must be sought outside the island of Celebes.

The resemblance of construction between this type and that of some houses and barns in the Micronesia is striking. The foundation of the latter is almost identical with that of the gampiri, and the walls of the houses are often made of boards, in a manner very much like that of the Koelawi house B. It is not unlikely that the Micronesian houses and the Koelawi house B have an origin in common, because in all probability there is a strain of Polynesian blood in the people in Central Celebes.

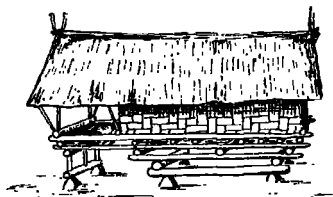
There are however other circumstances, pointing to another origin. This type of house is not only found in Koelawi but also in the districts called in common Pipikoro,



1



2



3

Fig. 261. House types from NW. Central Celebes.

- 1: from Tamoengkolowi;
- 2: from Koelawi;
- 3: from the Tele village of Ientoe.

south of Koelawi, where it predominates, and where this house has been accomplished by dividing it into several compartments. This may indicate the type as being older in Pipikoro than in Koelawi. Possibly this type has originated in Pipikoro, but this is not very likely, because there are no types found here, forming a transition to a more primitive structure.

The native name of house points however to a certain origin. In the Koelawi language house is called *hooe*, or sometimes *sooe*. This word does not seem to be used for a special type but for all three kinds of houses.

In Pipikoro, at least at Kantewoe, at Peana and in Tole, the word for house is *tomi*. In Bada it is *tami*. No doubt these two words are ethymologically the same and mean house in general without regard to any special type.

Of these two words *hooe* (*sooe*) very likely is a genuine Toradja word, and *tomi* or *tami* no doubt borrowed from a foreign language. In the Toradja languages, being so called open languages, every word ends in a vowel. Thus, if a word, borrowed from a foreign language, ends in a consonant, this will either be left out, or, more commonly, a vowel is added. The letter of *i* in *tomi* and *tami* is consequently added to the proper word, *tom* or *tan*, very likely the same as the Sanscrit word *dam*. But if the name for house is a Sanscrit word, that points to Java where Hindooism reigned for about fifteen hundred years, and from where it spread to the other islands of the Archipelago. That some Sanscrit word or other during this long period has spread even to the interior of Central Celebes is not unlikely, as we in this part can trace the Hindoo culture of Java, mediated by several intervening agents.

Conceivably the native word *hooe* originally was used for the native house type, represented by the Koelawi house A and the paningkoe, and the foreign words *tomi* and *tami* were connected with the type represented by the house B and the gampiri. If this is the case, the latter house type

came to Central Celebes from the south at a remote time. When the house type B finally, as I think not so very long ago, reached Koelawi, the house building in this district had attained so high a development that it was not necessary to introduce a new word for that special type of house,



After A. Grubauer.

Fig. 262. Houses at the village of Tedeboi in Rampi.

but the old word *hooe* could be applied to the new kind of house.

That we nowadays do not find this type of house in the districts south-west of Pipikoro may depend on foreign influence by which this type has been replaced by other, modern types. The present house type of the districts of Napoe, Behoa, Bada, Leboni, and Rampi in the SE. may however, have the same origin as the Koelawi house B. It

is quite possible that the difference between these two has originated in these districts.

As to the word *gampiri*, I have not been able to trace any relation between this word and Sanscrit.

Thus there are three possibilities as to the origin of the Koelawi house B (and the corresponding paddy barn called *gampiri*).

1) It has originated in N W. Central Celebes in the district of Pipikoro;

2) It was introduced from a foreign country, probably the same from which certain Micronesian house types have come;

3) It came from the south during the Hindoo period of Java, and to this type was originally attached the names of *tomi* and *tami*.

Finally I have described a house which I have called the *Lindoe* type, because we find it in all the inhabited villages of *Lindoe*. This type is never found in Koelawi, nor in Pipikoro.

The foundation of the *Lindoe* house resembles that of the Koelawi house B, but this foundation we also find in all the districts in the S E, and the south, from Napoe through Behoa and Bada as far as to Leboni and Rampi (Fig. 262). Besides, the *Lindoe* type in several respects reminds one of the houses in these districts, although as a rule it is built with less care than those, possibly owing to the fact that this type was introduced from the south not very long ago.

Two generations ago the present villages in *Lindoe* very likely did not exist. At that time the villages on the *Lindoe* Island were inhabited. Here the houses are of the same type as the Koelawi house B, particularly like this type such as we find it in Pipikoro.

## B. Temples.

Map 6.

If we compare the different temple types of Central Celebes we find that certain types resemble each other. The geographical distribution of these temples makes it evident that the type of one district has been influenced by the types of adjacent districts. When we find types quite different in the whole but still agreeing in certain details, it may be that those details which are the same in both types are remainders from a previous type from which they have both originated and developed.

We can comprehend several temple types to groups, but it seems difficult if not impossible to presume that all the types developed from a single original type of structure. The difference between some types are too fundamental to allow such a presumption.

As a rule the temples seem to have been located with the long axis either in the direction of north—south or east—west. A single temple such as that of Towocloe departs from this rule, the diagonals running in the direction of north—south and east—west.

According to Kruijt the direction of east—west was most common among the temples of Pose type. As the cardinal points have not been exactly set by the compass I have in Map 6 simply marked the temples of Poso type as being located in the direction of east—west.

In the western part of Central Celebes the temples were generally located in the direction of north—south. There are however exceptions such as the temples of Bokoe, of Makoedjawa, and of Tomado. The former evidently intentionally has been given the direction of east—west. As to the other two temples the cardinal points do not seem to have been considered when they were built, but they were most likely placed so as to be in a good position toward the other houses of the village.

In this connection I want to mention that in Map 6

I have given to the temple of Tedeboi the direction of east—west, analogically to the temple of Bokoe. .

To the temples of Bada-Beloa type I gave in Map 6 the direction of north—south, although the cardinal points have not been set. The lobo of Doda, however, which I studied had this direction, and to judge from literature this seems to have been the case with several temples of this type.

Any reliable method of setting the cardinal points the Toradjas do not seem to know, as the deflection from the north toward the east as well as toward the west sometimes is rather great in the temples that I have studied.

As I already mentioned I set the point by placing the north—south line of a compass, graduated into  $360^{\circ}$ , in the long axis of the temple. The compass needle will then show the deflection from the north—south line. In the first column of the following table is given the point received in this manner. The declination, however, that in 1918 probably was about  $2^{\circ}3/4$ — $3^{\circ}$  eastward, is not reckoned. In the second column the declination is reckoned, and here is given the deflection of the long axis of the temple from the north—south line toward the east, or the west.

It is difficult to explain why the location of the temples of the East and the West is different. Anyhow it does not seem to be casually. If there had been a difference of religious ideas of the tribes of the East and the West this might have caused the ensuing of two different temple types, but there is no reason to think that this was the case.

If we want to make clear the origin of the temple types, it will be necessary to find out the characteristics which a type has in common with other types, as well as the geographical distribution of these characteristics. In this way it will be possible to find the characteristics of native nature and those probably borrowed from other places, because very likely the construction of the temples in the



## The location of the temples in NW. Central Celebes.

Koelawi	Boladangko	4°	1°W.
	Mataoe	12°	9°W.
	Soengkoe	356°	7°E.
	Bolapapoe	30°	27°W.
Lindoe	Iwongko	340°	23°E.
	Langko	7°	4°W.
	Tomado	76°	73°W.
Tamoengkolowi	Tikala	4°	1°W.
Toro	Chief village	5°	2°W.
Gimpoe	North	355°	8°E.
	Middle	18°	15°W.
	South	0°	3 E.
,	Kantewoe	327°	36°E.
	Peana	345°	18°E.
	Benahoe	15°	12°W.
	Mopahi	355°	8°E.
Tole	Poraelea	33°	30°W.
Tobakoe north of the Koro	Siwongi	355°	8°E.
	Biro	350°	13°E.
	Lawe	345°	18°E.
Tobakoe south of the Koro	Towocloe	50°	47°W.
	Tipe	335°	28°E.
	Bokoe	85	82°W.
	Makoedjawa	280	83°E.

same manner as that of the dwellings has been influenced by foreign culture.

The Poso type, although differing from the lobos of the West as to the location, strikingly resembles the temples of Koelawi type, and to a certain degree also the Lindoe type. The floor of the Poso type as well as of the Koelawi type is divided into two compartments by a beam in the middle of the floor. In this manner we get two rows of floor planks which we never find in any other temple type. Also the roof-truss of the two temples agrees to a certain extent. There are always two main posts, one at each side of the floor, standing on the ground and carrying the ridge

pole. This is also the case with the Lindoe type. Besides there is in the Poso type at each corner a pole, placed on the ground outside the floor, supporting the roof. These poles are also found in most lobos of Koelawi type, but never in the other temples, except the Langko temple. The construction of the rafters also is similar, both types having a double row of rafters, forming an outer and an inner roof, the inner one, however, always lacking a roofing.

The likeness of these two types is so great, and at the same time they are so different to other types that I cannot help thinking that they have the same origin. But on the other hand, they are in so many respects different from one another that we must presume that they have developed independently for quite a long time.

The difference of the two types lies in the construction of the foundation, in the position of the fireplaces, in the adornment with wood carvings, in the center post, and in the site of the temples.

As we already know, the foundation of the Koelawi type consists of several layers of logs, placed crosswise, that of the Poso type of a great number of poles, driven into the ground. The difference very likely is due to the nature of the ground.

In both cases the purpose of the foundation no doubt is that of keeping the floor of the structure dry, a difficulty connected with the moist climate. A foundation like that of the Poso type is especially suited for low grounds, easily flooded, such as the southern and the northern shores of Lake Poso, the seashore of the district of Loewoe, and vast grounds in the neighbourhood of Lake Matano and Lake Towoeti. In the latter two places we often find genuine pile dwellings. I am of the opinion that the origin of the foundation of the Poso type is to be found in the pile dwellings of some of these districts.

The foundation of the Koelawi temple would be less suited for grounds, exposed to inundations. The structure

would run the risk of being carried off by the flood. A foundation such as that of the Koelawi type is only good in districts where, in spite of heavy rains, the grounds are not inundated, that is to say in the Highlands.

Very likely the foundation of logs placed crosswise, originated in the highlands of NW. Central Celebes, that of the temples as well as that of the paningkoe and of the Koelawi house of type A.

The other difference in construction in the Poso type and the Koelawi type may no doubt be referred to foreign influence.

The Poso type, in many respects closely connected with the Koelawi type in the NW., has hardly anything in common with its neighbour in the SW., the Bada-Behoa type. It is only the foundation that to a certain extent invites to comparison. Both types rest on poles driven into the ground, but the size of these poles as well as their number and their position is quite different. The Poso type has always a great number of comparatively slender, sometimes very high poles, never placed in groups. The poles of the Bada-Behoa type are rather short but of great thickness. They are not so numerous as those of the Poso type but often arranged in groups of two or three, always in three rows, each row containing three groups of poles.

It is difficult to trace the origin of the foundation of the Bada-Behoa type, as there are no other structures in the district itself or in the adjacent districts having a foundation like that of the temple.

Possibly the poles are of this thickness, because none of the poles supporting the roof rest on the ground, giving the necessary solidity to the structure. This foundation as well as that of the Poso type is apparently suited to the nature of the ground. All the districts where the Bada-Behoa type is found are valley basins, formerly being lakes. These basins in many places still are morassy, and when the rains set in often become flooded.

The dwellings and the paddy barns of these districts, however, have as we know a foundation of about the same appearance as that of the Koelawi house B. This kind of house is very likely of foreign origin, having perhaps replaced the native pile dwellings of which the temple is the last remainder.

Further to the NW. in the districts that I have studied, we have the small Towoeloe type which perhaps was found so far northward as in the Paloe Valley where it became a neighbour of the Poso type.

The Towoeloe type and the Poso type have not much in common, however. We only notice a center post lacking in both structures, as well as the roofing always being of atap in the Towoeloe type as well as in several temples of Poso type. Outside of that the construction of the temples is so different that it is necessary to presume that these two types have developed. the one independantly of the other.

There is a certain likeness between the Towoeloe type and the Koelawi type, both of them having a foundation of logs, placed crosswise on the top of one another. Like all temples of Koelawi type the Towoeloe type has no adornments in form of wood carvings in the inside.

The more primitive of these two types is no doubt the Towoeloe type. As to its size, it is more like that of a common dwelling-house, the roof is covered with atap, and there is no post in the center of the structure. In a temple of this type there may even be shelves at the bottom of the roof, just as in the dwellings. This was at least the case at the gables in the temple of Towoeloe. There are no walls at all, just as in several temples of Koelawi type as for instance Boladangko, Soengkoe, and Iwongko. This is surely a characteristic of primitive nature, because in many places in eastern Central Celebes, in NE. Celebes, and at Banggakoro the houses lack proper walls. There are only some pieces of atap or palm leaves loosely inserted. In this connection I want to mention that at festive occasions the





temple of Towoeloe was provided with temporary walls of loose palm leaves.

The chief difference between the Towoeloe temple and a dwelling house is that the former has a floor of planks, shelflike platforms round the floor, and two fireplaces, one at each gable. The name of this temple, *sooe eo*, also indicates its being of primitive nature and closely connected with the dwellings, *sooe* meaning house and *eo* day. The only temple type of Central Celebes, representing a still more primitive stage, is the *bentaja*, for instance that of Onoe.

The construction of this kind of *bentaja* and the use of it is the same as that of some other primitive structures and can give us an idea of the origin of the village temple.

The village temple is as we know chiefly used for celebrating the great religious feasts, and for the performance of certain religious ceremonies. Besides it will serve travellers as night quarters, and sometimes it is used for conferences.

Originally there very likely was no special house in a village built only to be used on these occasions, but the house of the chief or the priest was used for the purposes in question. This is still the case in NE. Celebes where the natives never had any special structures used as temples, and very likely was so formerly in the eastern part of Central Celebes to judge from what Kruijt tells us about the district of Mori.

At Peana the former master of the country, the so called *maradika malolo*, had built a kind of veranda close to the north gable of his house. There was a fireplace in the middle of the floor but no walls. This extension of the house was said to be used when the *maradika* consulted his village chiefs and sometimes for a so called *balia*, an invoking of the spirits for some purpose or other, and sometimes way-faring people slept on the veranda. That is to say it had to do the service of a *bentaja*. There were however no platforms along the sides (Fig. 263).

If this addition of the house is detached from the main structure and provided with bunks at least along two sides we have a house quite like the bentaja. The next step toward the village temple is no doubt represented by the 'To-woeloe type. This primitive temple type has as we already know much in common with the Koelawi type, and it is not

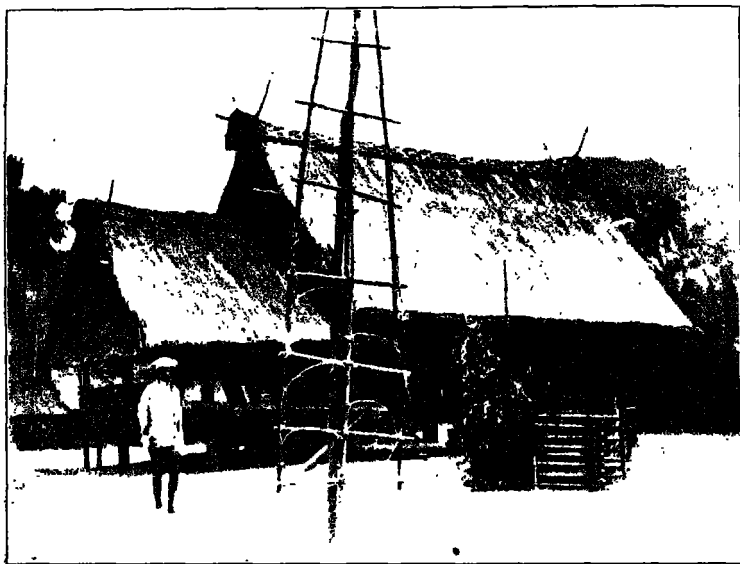


Fig. 263. The house of the *maradiha malolo* at Peana. The frame in front of the house had been used for a religious feast.

unlikely that the latter type is to be conceived as a mixture of the Towoeloe type with the Poso type.

In the same manner the Lindoe type may be considered as a combination of the Koelawi type with the Bada-Behoa type. The Lindoe temple may for the same reason as the Lindoe house be conceived as a structure of comparatively modern date.

According to the statements of the natives of Lindoe there was about a hundred years ago only one temple in the



district, the one on the Lindoe Island. Temples as well as houses seem at that time to have been built in the same manner as in Koelawi. Later when the district was exposed to an influence from the SE., probably from Napoe, and the present villages were built, the construction of the houses was to a certain extent influenced by Napoe, but the old method of building was kept in some details. The foundation, the roof-truss, and the absence of wood carvings still remind us of the Koelawi type. The steep slant of the roof, the gable adornments, the absence of a center post, and especially the way of supporting the bar at the bottom of the roof by slanting props, standing on the top logs of the foundation, all these characteristics the Lindoe type has in common with the temples of Bada-Behoa type. The only thing that seems to be original with the Lindoe type is the position of the fireplaces: one at each long side of the temple.

The temple types in Pipikoro, the Kantewoe, the Tole, the Tobakoe, the Mopahi, and the Bokoe type can hardly be derived from any of the above mentioned types. The one best developed and most characteristic of them all is undoubtedly the Kantewoe type. Consequently it will be of great importance to find the origin of that type. In many respects it is quite different to other types as for instance in the foundation, the platforms, the walls, the roof-truss, and to a certain extent the wood carvings adorning the walls. The Kantewoe type has some of these characteristics in common with the Koelawi house B and the gampiri. This is especially the case as to the foundation and the walls.

As I mentioned before the type represented by the Koelawi house B and the gampiri very likely has come from the SW., probably at the time when Hindooism spread from Java to the other islands of the present Dutch East Indies. We may then consider the Kantewoe type as being introduced into the country at the same time and from the same place as those. The new type being in many respects superior to the native house type, was applied not only to the dwellings

and the barns but also to the temples. Part of the wood carvings adorning the temples of Kantewoe type also indicate foreign influence.

In the native temple types which I believe to be more primitive there are no wood carvings found, only some shingles at the bottom of the roof, carved in the shape of hooks and horns (Fig. 104). These figures sometimes were explained as representing buffalo horns. This may however be an error, and possibly this ornament is older in Celebes than the buffalo. Anyhow, it is very common in the lobos of Koelawi type but is altogether missing or only in rare cases found on the gables of the temples of Kantewoe type.

To this type belong chiefly wood carvings representing the buffalo's head and the human genitals, both motives very likely taken from the Hindoo culture.

The buffalo is not a native of Celebes. For several reasons I think it most likely that it first came to South Celebes, probably from Java during the Hindoo period of this island, and later spread to Central Celebes.

The native name of the buffalo is in most Toradja languages *bengka* or *bengga*. Kruijt has not been able to trace the ethymology of this word, but is of the opinion that it may be a substitute for the native word *baola* (meat). He says: »Bengga is misschien uit het Parigi'sch overgenomen om een wisselwoord te hebben.» To me it seems more likely that *bengga* is a word borrowed from a foreign language, introduced into Celebes with the buffalo, perhaps a hindoo word possibly of the same origin as the modern hindi word *bhains*.

The second motive of the wood carvings of the Kantewoe type, the human genitals, may also be connected with Hindooism, that is to say with Siwaism and its phallus cult. This kind of wood carving is very common all over Pipikoro, especially at Kantewoe, at Peana and in Benahoe, the districts most easily communicating along the Karangana Valley with the districts in the SW. In Pipikoro

we not only find these carvings in the temples but also now and then in the dwellings.

In the districts north of Kantewoe those carvings are more scarce, and north of the Koro they are altogether missing, if we leave out of consideration some carvings of this type evidently made in later times.

In the temple of Benahoe there is a small carving (Fig. 134), representing a conventionalized buffalo's head, crowned by a human shape the head of which is surrounded by three rays, one running upward and two sideways, joined to an aureola. I have not seen such another carving at any other place in Central Celebes. This makes me think that the motive is borrowed from abroad and that it perhaps represents a Buddha's head, thus another example of the Hindoo influence in these far off districts.

According to Kruijt, in the temples of Poso type there were also often found wood carvings representing the human genitals. They may, however, here as well as in the NW. be of foreign origin. They were not found in every temple, and they became less common in the north to judge from literature. In Saoesoe and in Parigi for instance there may not have been any phallus figures.

A wood carving that seems to have been found in every temple of pure Poso type, representing a crocodile, was possibly of native origin, while those representing human genitals, women's breasts etc. have come from the south, over Loewoe.

Although the temples in Pipikoro no doubt have been much influenced by Hindooism, there is still reason to presume that the temple structures were not introduced at the time of Hindooism, but existed already before this time. The other temple types of Pipikoro, especially the Tole, the Tobakoe, and the Bokoe type are then easily explained. They have kept some features of a more primitive method of building, combined with characteristics originally belonging to the type that penetrated from the south.

The Mopahi type also very likely was influenced by Hindooism, but as I had not the opportunity of studying it closely, I cannot decide the origin of such a characteristic as the peculiar position of the entrances.

Beside all these temple types there are some temples of late date, apparently being only a casual composition of two different types, not resulting in a new temple type. Such temples are those of Toro, of South Gimpoe, of Rato and of Napoe.

The Toro temple is a combination of the Koelawi and the Kantewoe types, possibly influenced by Behoa-Napoe. The foundation as well as the double roof belong to the Koelawi type, the platforms and the walls remind us of the Kantewoe type. The staircases are like those of a Napoe or possibly a Tawaelia temple. The construction of the temple of South Gimpoe agrees in almost every detail with that of the Towoeloe type, except the platforms which in many respects are like those of several temples of Koelawi type. Like the Koelawi temples the gables turn toward the north and the south.

As to the Rato temple I have already pointed out its likeness with no less than three temple types, the Poso type, the Bada-Behoa type, and the Bokoe type. To decide which type was primary, and what was borrowed from other types is of course difficult, but it seems to me as if the temple had been of Poso type, strongly influenced by the two above mentioned types.

Finally, the big temple of Napoe seems to have been a combination of the Poso type and the Bada-Behoa type with an addition of characteristics peculiar only to this temple. The location of the temple and the double roof belong to the Poso type, but outside of that the construction seems more to be that of the Bada-Behoa type. Peculiar to this temple is the number of the fireplaces, there were no less than 5 of them, and the platforms in two shelves, running all round the floor. The influence of the Poso type in Napoe is easily explained.

The natives of Napoe, the most feared of all headhunters in Central Celebes, when they wanted salt, buffaloes, or slaves used to go off to the districts of the Poso Toradjas who gave them what they wanted, or they took it when not given voluntarily. The consequence was that the Poso slaves were very numerous in Napoe, and being charged with all heavy work, it is quite natural that when they were building a house or a temple they did as they were used to doing.

Beside these combinations of two or more than two types, we now and then discover a detail in a temple that does not belong to the type but must be considered as borrowed from another type. In the lobo of Mataoe there is in the staircase a wood carving, representing a vulva, an ornament that is not found in any other temple of Koelawi type.<sup>2</sup> The walls like those of a Koelawi house B that are found in some lobos of Koelawi type, probably do not originally belong to this type.

The result of the constant hostility between the tribes of Central Celebes was that natives from one district were made slaves in another, and through these slaves no doubt customs and habits spread from one district to another. That the wars even of late date have contributed to spreading objects from one tribe to another I noticed at Kantewoe where during the last 50 years a great number of objects had been taken from Pada, the district SE. of Kantewoe. The door in Fig. 36 is a prey from this country.

There must, however, have been other reasons than the wars that made the natives of one district adapt customs and types of structures belonging to another tribe. This was evidently the case with the lobo of Bolapapoe, a poor copy of the Kantewoe lobo.

How it happened that there was built a temple of Kantewoe type in the middle of a district where the Koelawi type is the only one used, we do not know for certain. The natives of Koelawi and Kantewoe never fought, very likely because the districts were separated by the Koro which

could not be passed by a boat, only on a ratan bridge about 50 m. long. Thus there are no Kantewoe slaves in Koelawi. An old lobo of Bolapapoe that was burnt down with the whole village in the eighteen-fifties was said to have been of the same construction as the other lobos of the district. When the village was rebuilt a new lobo was built, but what kind of temple that was, I do not know. The lobo that I studied in 1918 could not be so very old. Possibly it was built after the earthquake in 1909 when part of Bolapapoe and several other villages were severely damaged. Perhaps the reason for making a temple of Kantewoe type in Koelawi was the want of a bigger temple in the chief village of Koelawi than in the other villages. Then the natives made a temple of Kantewoe type, that type being much bigger than the temples of Koelawi type.

No doubt a study of the native names of the temples and the different parts of the temples would give valuable indications as to the origin and development of the types.

The temples in the districts that I visited generally seem to have been called *lobo*. The name of the temples of Bada—Behoa type was *doehoenga*, *doesoenga*, or *doesoena*. The small type found in Tobakoe north of the Koro is as we know called *sooe eo*. In Tawaelia the name for a temple was *sowa*, and in Parigi a temple was called *banggoja*. In the Paloe Valley the *bantaja* was a certain kind of temple. In the highlands south of the Valley there are a kind of small temple annexes, called *bentaja*, already mentioned.

To judge from all these different names the temples cannot be of the same origin. The meaning of the names, however, is not always clear.

The word *lobo* is a native word, I should think justly interpreted by Kruijt who says the word means simply plank, and refers to the floor, being made of planks.

The interpretation of the word *sowa*, given by Kruijt, seems less convincing. He translates the word by »ruimte, ruime plaats» which seems rather senseless when it is the

question of a temple. It is more likely that the word *sowa* is the same as the Koelawish *hooe* or *sooe* which means house. The meaning of the Napoe word *howa* is probably the same, *howa* and *sowa* thus actually being the same word, because in the Toradja languages of NW. Central Celebes the letters *h* and *s* are equivalent, and very likely both words are pure native words.

The meaning of the words *doehoenga*, *doesoenga*, and *doesoena* I do not know, but it is remarkable that these temples the construction of which is different to other temples, have a peculiar name, possibly indicating the Bada—Behoa type as a type that developed independantly of the other temple types.

As to the words *bantaja* and *bentaja* those two are very likely the same word. The meaning of it, however, I cannot give. Possibly it is connected with the Sanscrit word *band* which means worship.

The word *bantaja* is also used by the Poso Toradjas, although not as name for a temple, but for a particular kind of structure, only used when the natives celebrated the great religious feast in honor of the dead. Kruijt writes the following:

»Wanneer een doodenfeest staat gevierd te worden, moeten daaraan eerst vele toebereidselen voorafgaan; het voornaamste hieronder is zeker wel het oprichten van tal van hutten, *bantaja*, warin. de gasten gedurende het feest verblijf zullen vinden».

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